Dataset Integrity Check for Adult-to-Adult Living Donor Transplantation Cohort Study (A2ALL)

As a partial check of the integrity of the A2ALL datasets archived in the NIDDK data repository, a set of tabulations was performed to verify that published results from the A2ALL study can be reproduced using the archived datasets. A small number of analyses were performed to duplicate published results for A2ALL subjects and a supplemental sample of liver transplant cases extracted by A2ALL investigators from the Scientific Registry of Transplant Recipients (SRTR). A report on these data was published in 2008 by the American Journal of Transplantation [1]. The results of this integrity check are described below.

Purpose. The intent of this dataset integrity check is to provide confidence that the dataset distributed by the NIDDK repository is a true copy of the study data. Our intent is not to assess the integrity of the statistical analyses reported by study investigators. As with all statistical analyses of complex datasets, complete replication of a set of statistical results should not be expected on a first (or second) exercise in secondary analysis. This occurs for a number of reasons including differences in the handling of missing data, restrictions on cases included in samples for a particular analysis, software coding used to define complex variables, etc. Experience suggests that most discrepancies can ordinarily be resolved by consultation with the study DCC, however this process is labor-intensive for both DCC and Repository staff. It is thus not our policy to resolve every discrepancy that is observed in a dataset integrity check. Thus, we do not attempt to resolve minor or inconsequential discrepancies with published results or discrepancies that involve complex analyses unless staff of the NIDDK Repository suspect that the observed discrepancy suggests that the dataset may have been corrupted in storage, transmission, or processing by repository staff. We do, however, document in footnotes to the dataset integrity check or by highlighting in tables those instances in which our secondary analyses produced results that were not fully consistent with those reported in the target publication.

Datasets. The recipient dataset used for these analyses was created by merging the datasets ***niddk_cdr_retro_rcp.sas7bdat*** and ***niddk_cdr_retro_rcp_srtr.sas7bdat*** received from the DCC (both with date stamps of 8-27-2010). SAS code supplied by the DCC was used to create analysis variables required to replicate the analyses in Freise et al. That SAS code is given in Appendix B; it was executed by NIDDK Repository staff to generate the analysis file: ***Recip_all.sas7bdat*** which was stored on the Repository server (Date Stamp: October 18, 2010). This SAS dataset was converted to STATA format using Stat/TRANSFER and output as a STATA data file: ***STAN_recip_all.dta*** (date stamp: October 18, 2010). The A2ALL donor dataset is niddk_cdr_retro_dnr.sas7bdat (date stamp 8-27-2010). This donor dataset was output to the STATA data file niddk_cdr_retro_dnr.dta (date stamp: October 19, 2010)..

Sample Date Matching. The Friese et al. article specifies that "Entry of a recipient into the A2ALL Retrospective Cohort Study required the identification of a potential donor who completed a history and physical examination during the period January 1, 1998 to February 28, 2003 at one of the nine U.S. transplant centers (p. 2570)."

Sample matching was performed using the variable ***don_hp_date*** which identified the date for donor H&P.[1] This date ranged from February 11, 1998 to October 11, 2004. Cases were excluded if this date occurred after February 28, 2003.[2] This excluded 8 cases from the database leaving a total sample size of 799.

Groups. The variables ***LDLT*** and ***DDLT*** were used to identify recipients who received livers from living *vs.* dead donors. In the date-matched sample, we identified: 383 respondents who received livers from living donors, 216 respondents who received livers from dead donors, and 200 who were missing data on these variables — presumably because these respondents had not received liver transplants. This was confirmed with two exceptions[3] by the observation that "date of transplant" ***(gout_txp)*** was missing when both ***LDLT*** and ***DDLT*** were both coded as zero, i.e., not living nor dead donor.

Comparison of Sample Sizes. The Freise et al. article identifies 384 recipients of livers from a living donor and 216 recipients of livers from dead donors. Our sample size calculation matches the published N for dead donor transplants (216) and is one short of the N for living donor transplants (383 vs. 384). This minor discrepancy may be due to an anomaly in the dataset provided to the Repository or due to a minor divergence in the implementation of our date inclusion algorithms.

Comparison of Characteristics of Patients. Table 2 of the Freise et al. article selected characteristics of the LDLT and DDLT patients who *received* transplants. The archived data were analyzed to produce the same characteristics reported by Freise et al. Our **Table 1a** compares the published results to those obtained from our analysis of the archived data for transplant recipients. It will be seen from **Table 1a** that overall calculations from the archived data closely replicate the published results with the several small discrepancies (highlighted in yellow and green). There is, however, one more substantial divergence. The published cold ischemia time for DDLT patients was 441 minutes (sd = 215) while our calculation from the supplied dataset was 473 minutes (sd = 181). While this discrepancy is non-trivial, we do not think it raises questions about the integrity of the dataset.

Table 1b compares results for published characteristics of A2ALL *donors* and those calculated from the archived dataset. It will be seen from Table 1b that there are only minor observed discrepancies between published and calculated characteristics of A2ALL donors.

Comparison of Transplant Complications. Freise et al. article reports the frequency distributions of the number of complications for three groups of patients: (1) LDLT patients whose transplants were among the first 20 done by their transplantation center; (2) LDLT patients whose transplants were the 21st or later for the transplant center; and (3) patients who received transplants from deceased donors (DDLT). As can be seen from our **Table 2,** there are only a small number of minor discrepancies between published and calculated number of transplant complications.

The Freise et al. article also reports the nature of the complications for this same three groups. As can be seen from our Table 3 — with a few exceptions — there are only a small number of minor discrepancies. These exceptions involve: the percentage of transplants that experienced (1) incisional hernias in the

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[1] We presumed this to be Health and Physical exam, and we queried the DCC. We have not had a response to this question.

[2] That is rawdate > 15764 (days elapsed since January 1, 1960).

[3] Respondents 2331 and 4168 ***(resp_id)*** were coded as 0 for both ***LDLT*** and ***DDLT*** but they had a valid date of liver transplant ***(gout_txp).***

LDLT-21+ (8.3 vs 11.5%) and DDLT (8.3 vs. 10.2%) groups, and (2) pulmonary bacterial infections (8.8 vs. 10.7%) and the summary measures for "all infections" and "all bacterial infections."

Conclusion. Analysis of A2ALL data archived at the NIDDK Repository produced results that are very (but not perfectly) consistent with the results published in 2008 by Freise et al. (1). Given the myriad potential sources of divergence in our analyses (e.g., minor variations in inclusion dates, handling of missing data, 1-case variation in sample size, etc.), I believe these results warrant confidence in the integrity of these datasets.

References.

1. Freise CE, Gillespie BW, Koffron AJ, Lok AS, Pruett TL, Emond JC, Fair JH, Fisher RA, Olthoff KM, Trotter JF, Ghobrial RM, Everhart JE; A2ALL Study Group. Recipient morbidity after living and deceased donor liver transplantation: findings from the A2ALL Retrospective Cohort Study. Am J Transplant. 2008 Dec;8(12):2569-79. Epub 2008 Oct 24.

TABLE 1a. ***Recipients:*** **Characteristics of living donor (LDLT) and deceased donor liver transplant (DDLT) recipients: Means and Percent Distributions. (Trivial differences highlighted in light yellow; more substantial differences are highlighted in light green; comparison to Freise et al., 2008, Table 2.)**

CHARACTERISTICS	LDLT n (%) or Mean ± 1 SD				DDLT n (%) or Mean ± 1 SD			
	Published		Calculated		Published		Calculated	
RECIPIENT characteristics	**n or Mean ± 1 SD**	%	**n or Mean ± 1 SD**	**%**	**n or Mean ± 1 SD**	%	**n or Mean ± 1 SD**	**%**
(BASE N)		***(384)***		***(383)***		***(216)***		***(216)***
Age	49.6 ± 10.7	---	49.5 ± 10.7		51.4 ± 9.7	---	51.6 ± 9.8	---
Sex								
Female	162	42%	162	42%	88	41%	88	41%
Male	222	58%	221	58%	128	59%	128	59%
Ethnicity								
Hispanic	74	19%	74	19%	40	19%	42	19%
Non-Hispanic	310	81%	309	81%	176	81%	174	81%
Race								
White	348	91%	347	91%	190	88%	190	88%
African American	12	3%	12	3%	13	6%	13	6%
Asian	15	4%	15	4%	7	3%	7	3%
Other	9	2%	9%	2%	6	3%	6	3%
Body mass index1 (kg/m2)	27 ± 5	---	27 ± 5	---	27 ± 5	---	27 ± 5	---
Diagnosis (multiple diagnoses possible)								
Hepatitis C diagnosis (HCV)	184	48%	183	48%	102	47%	103	48%
Hepatocellular carcinoma diagnosis (HCC)	63	16%	57	15%	39	18%	33	15%
Alcohol *(-ic cirrhosis*)	52	14%	52	14%	32	15%	32	15%
Cholestatic liver disease	71	18%	71	19%	39	18%	38	18%
Noncholestatic cirrhosis other than HCV/alcohol	80	21%	80	21%	48	22%	48	22%
Metabolic disease	11	3%	11	3%	7	3%	7	3%
Biliary atresia	3	1%	3	1%	0	0%	0	0%
Malignancy other than HCC	11	3%	9	2%	5	2%	3	1%
Other	9	2%	10	3%	3	1%	5	2%
MELD score at transplant1,2								
Categorical								
6–10	80	21%	80	21%	22	10%	22	10%
11–20	229	60%	230	60%	104	48%	103	48%
21–30	48	13%	48	13%	45	21%	46	21%
31–40	10	3%	10	3%	41	19%	41	19%
Missing	16	4%	15	4%	4	2%	4	2%
Continuous	15 ± 6	---	15 ± 6	---	21 ± 9	---	21 ± 9	---
Medical condition at transplant								
Not hospitalized	335	87%	334	87%	130	60%	128	59%
Hospitalized (not ICU)	42	11%	42	11%	48	22%	48	22%
ICU	7	2%	7	2%	38	18%	40	19%
Severity								
Ventilator	5	1%	5	1%	15	7%	17	8%
Ascites	222	58%	222	58%	160	74%	160	75%
Dialysis	7	1%	5	1%	14	6%	16	7%
Intraoperative								
Cold ischemia time (minutes)	87 ± 94	---	84 ± 95	---	441 ± 215	---	473 ± 181	---
Duration of recipient operation (minutes)	511 ± 129	---	506 ± 127	---	371 ± 96	---	369 ± 94	---

NOTES. Calculated percentages include small number of cases with missing values in denominator.

TABLE 1b. *Donors* : Characteristics persons donating livers in living donor liver transplants (LDLT): Means and Percent Distributions. (Trivial differences highlighted in light yellow; more substantial differences are highlighted in light green; comparison to Freise et al., 2008, Table 2.) (c)

CHARACTERISTICS	LDLT n (%) or Mean ± 1 SD				DDLT n (%) or Mean ± 1 SD			
	Published		Calculated		Published		Calculated	
DONOR characteristics (LDLT only)	**n or Mean ± 1 SD**	%	**n or Mean ± 1 SD**	**%**	**n or Mean ± 1 SD**	%	**n or Mean ± 1 SD**	**%**
Age	37 ± 9.7		37 ± 9.6			na	na	na
Intraoperative hypotension (<100 mmHg)1	88	23%	88	23%	na	na	na	na
Number of donor bile ducts								
1	205	53%	211	52%	na	na	na	na
2	135	35%	137	34%	na	na	na	na
3	21	5%	23	6%	na	na	na	na
Missing	23	6%	32	8%	na	na	na	na
Type of anastomosis								
Roux-en-Y	199	52%	*(a)*	52%	na	na	na	na
Other	218	47%	*(a)*	47%	na	na	na	na
Missing	5	2%	*(a)*	2%	na	na	na	na
Graft weight to recipient weight ratio <0.84	30	8%	*(b)*	*(b)*	na	na	na	na

(a) Original calculations completed in October, 2010; calculated percents are shown. Ns were requested in November 2010, and analyst could not locate output to identify Ns.

(b) Not calculated due to complexity.

(c) Calculated percentages include small number of cases with missing values in denominator.

TABLE 2. Percent distributions of number of complications by: (1) experience with living donor transplants (<21 vs. 21+), and (2) dead donor transplants. (Trivial differences highlighted in light yellow; more substantial differences are highlighted in light green; comparison to Freise et al., 2008, Table 3.)

Number of Complications	<21 Living Transplants				21+ Living Transplants				Dead Donor Transplants			
	PUBLISHED		CALCULATED		PUBLISHED		CALCULATED		PUBLISHED		CALCULATED	
	n	%	n	%	n	%	n	%	n	%	n	%
0	16	10	14	8	50	23	47	22	47	22	43	20
1	21	13	21	13	38	18	37	17	40	19	39	18
2	27	16	28	17	32	15	33	15	36	17	36	17
3	18	11	18	11	24	11	24	11	19	9	22	10
4	14	8	14	8	15	7	15	7	24	11	23	11
5	14	8	14	8	17	8	17	8	10	5	11	5
6	11	7	11	7	11	5	11	5	4	2	4	2
7	15	9	15	9	5	2	7	3	8	4	9	4
8	7	4	7	4	7	3	7	3	7	3	6	3
9	9	5	8	5	7	3	7	3	5	2	5	2
10+	15	9	16	10	11	5	12	6	16	7	18	8
(BASE N)		(167)		(166)		(217)		(217)		(216)		(216)

Note. All percentages rounded to integer values.

TABLE 3. Recipients: Percent distributions of type of complications by: (1) experience with living donor transplants (<21 vs. 21+), and (2) dead donor transplants. (Trivial differences in percentages are highlighted in light yellow; more substantial differences are highlighted in light green; comparison to Freise et al., 2008, Table 4; see Note a.)

COMPLICATIONS	LDLT < 21				LDLT 21+				DDLT			
	PUBLISHED		CALCULATED		PUBLISHED		CALCULATED		PUBLISHED		CALCULATED	
	n	%	n	%	n	%	n	%	n	%	n	%
Surgical complications												
Biliary complications	84	50.3	84	50.6	77	35.5	78	35.9	53	24.5	53	24.5
Biliary leak or biloma	63	37.7	63	37.9	59	27.2	59	27.1	22	10.2	22	10.2
Biliary stricture	36	21.6	36	21.7	39	18.0	40	18.4	35	16.2	35	16.2
Other surgical complications												
Unplanned reexploration	60	35.9	60	36.1	42	19.4	42	19.4	37	17.1	38	17.6
Hepatic artery thrombosis	14	8.4	14	8.4	11	5.1	11	5.1	5	2.3	5	2.3
Portal vein thrombosis	7	4.2	7	4.2	4	1.8	5	1.8	0	0.0	0	0.0
Intraabdominal bleeding	13	7.8	13	7.8	14	6.5	14	6.5	17	7.9	18	8.3
Intraabdominal abscesses	17	10.2	17	10.2	17	7.8	17	7.8	11	5.1	11	5.1
Ileus	5	3.0	5	3.0	11	5.1	11	5.1	10	4.6	10	4.6
Bowel obstruction	9	5.4	9	5.4	4	1.8	4	2.3	4	1.9	4	1.9
Pneumothorax	5	3.0	5	3.0	0	0.0	0	0.0	5	2.3	5	2.3
Wound dehiscence	5	3.0	5	3.0	5	2.3	5	2.3	7	3.2	7	3.2
Incisional hernia	22	13.2	22	13.2	18	8.3	25	11.5	18	8.3	22	10.2
Inferior vena cava thrombosis	0	0.0	0	0.0	3	1.4	3	1.4	4	1.9	4	1.9
Neuropraxia	2	1.2	3	1.8	3	1.4	4	1.8	5	2.3	5	2.3
Medical complications												
GI bleeding	16	9.6	16	9.6	17	7.8	18	8.3	6	2.8	8	3.7
Pulmonary edema	24	14.4	24	14.5	22	10.1	23	10.6	45	20.8	47	21.8
Respiratory arrest	4	2.4	4	2.4	7	3.2	8	3.7	15	6.9	15	6.9
Hepatic encephalopathy	9	5.4	9	5.4	9	4.1	9	4.2	22	10.2	22	10.2
Myocardial infarction	1	0.6	1	0.6	2	0.9	2	0.9	1	0.5	1	0.5
Congestive heart failure	2	1.2	2	1.2	0	0.0	0	0.0	2	0.9	2	0.9
Pleural effusion	37	22.2	37	22.3	41	18.9	41	18.9	45	20.8	46	21.3
Cardiopulmonary arrest	5	3.0	5	3.0	3	1.4	3	1.4	9	4.2	9	4.2
Aspiration	5	3.0	5	3.0	3	1.4	3	1.4	4	1.9	4	1.9
Pulmonary embolism	1	0.6	1	0.6	1	0.5	1	0.5	0	0.0	0	0.0
Ascites	35	21.0	35	21.0	19	8.8	20	9.2	36	16.7	37	17.1
Chronic rejection	8	4.8	8	4.8	11	5.1	12	5.5	12	5.6	13	6.0
Recurrence of disease, excluding HCV and HCC	9	5.4	9	5.4	10	4.6	11	5.1	4	1.9	3	1.4
Deep vein thrombosis	2	1.2	2	1.2	2	0.9	2	0.9	5	2.3	5	2.3
Infections												
Overall infections	80	47.9	80	48.2	72	33.2	76	35.0	73	33.8	77	35.7
All bacterial infections:	69	41.3	69	41.6	71	32.7	75	34.6	68	31.5	72	33.3
Bile duct	19	11.4	19	11.5	17	7.8	18	8.3	7	3.2	8	3.7
Wound	21	12.6	21	12.7	21	9.7	21	9.7	23	10.6	23	10.7
Blood	38	22.8	38	22.9	31	14.3	33	15.2	31	14.4	32	14.8
Liver abscess, separate from cholangitis	7	4.2	7	4.2	4	1.8	4	1.9	2	0.9	2	0.9
Pulmonary	17	10.2	17	10.2	15	6.9	18	8.3	19	8.8	23	10.7
Central nervous system	1	0.6	1	0.6	1	0.5	1	0.5	0	0.0	0	0.0
Urinary tract	22	13.2	22	13.2	16	7.4	16	7.4	24	11.1	25	11.6
All viral infections	7	4.2	7	4.2	6	2.8	6	2.8	12	5.6	14	6.5
All fungal infections:	21	12.6	22	13.3	13	6.0	13	6.0	24	11.1	25	11.6
Pulmonary	5	3.0	6	3.6	1	0.5	1	0.5	14	6.5	14	6.5
Urinary tract	2	1.2	2	1.2	5	2.3	5	2.3	12	5.6	13	6.0
Wound	6	3.6	6	3.6	2	0.9	2	0.9	3	1.4	3	1.4
Bile duct	0	0.0	0	0.0	2	0.9	2	0.9	0	0.0	0	0.0
Blood	8	4.8	8	4.8	2	0.9	2	0.9	7	3.2	8	3.7
Liver	4	2.4	4	2.4	1	0.5	1	0.5	0	0.0	0	0.0
Central nervous system	3	1.8	3	1.8	1	0.5	1	0.5	0	0.0	0	0.0
Other complications	48	28.7	49	29.5	60	27.6	61	28.1	51	23.6	53	24.5
(BASE N)		*(167)*		*(166)*		*(217)*		*(217)*		*(216)*		*(216)*

COMPLICATIONS	LDLT < 21		LDLT 21+		DDLT	
	Published %	Calculated %	Published %	Calculated %	Published %	Calculated %
Ascites	21.0	21.0	8.8	9.2	16.7	17.1
Chronic rejection	4.8	4.8	5.1	5.5	5.6	6.0
Recurrence of disease, excluding HCV and HCC	5.4	5.4	4.6	5.1	1.9	1.4
Deep vein thrombosis	1.2	1.2	0.9	0.9	2.3	2.3
Infections						
Overall infections	47.9	48.2	33.2	35.0	33.8	35.7
All bacterial infections:	41.3	41.6	32.7	34.6	31.5	33.3
Bile duct	11.4	11.5	7.8	8.3	3.2	3.7
Wound	12.6	12.7	9.7	9.7	10.6	10.7
Blood	22.8	22.9	14.3	15.2	14.4	14.8
Liver abscess, separate from cholangitis	4.2	4.2	1.8	1.9	0.9	0.9
Pulmonary	10.2	10.2	6.9	8.3	8.8	10.7
Central nervous system	0.6	0.6	0.5	0.5	0.0	0.0
Urinary tract	13.2	13.2	7.4	7.4	11.1	11.6
All viral infections	4.2	4.2	2.8	2.8	5.6	6.5
All fungal infections:	12.6	13.3	6.0	6.0	11.1	11.6
Pulmonary	3.0	3.6	0.5	0.5	6.5	6.5
Urinary tract	1.2	1.2	2.3	2.3	5.6	6.0
Wound	3.6	3.6	0.9	0.9	1.4	1.4
Bile duct	0.0	0.0	0.9	0.9	0.0	0.0
Blood	4.8	4.8	0.9	0.9	3.2	3.7
Liver	2.4	2.4	0.5	0.5	0.0	0.0
Central nervous system	1.8	1.8	0.5	0.5	0.0	0.0
Other complications	28.7	29.5	27.6	28.1	23.6	24.5
(BASE N)	*(167)*	*(166)*	*(217)*	*(217)*	*(216)*	*(216)*

Appendix A

The full text of the article referenced will be provided to approved data requestors along with the archived data.

Freise CE, Gillespie BW, Koffron AJ, Lok AS, Pruett TL, Emond JC, Fair JH, Fisher RA, Olthoff KM, Trotter JF, Ghobrial RM, Everhart JE.
A2ALL Study Group. Recipient morbidity after living and deceased donor liver transplantation: findings from the A2ALL Retrospective Cohort Study.
Am J Transplant. 2008 Dec; 8(12):2569-79. *Epub* 2008 Oct 24.

APPENDIX B

SAS Code Supplied by DCC to Permit Replication

```
options ps=55 ls=78 nonumber formchar='|----|+\---+=|-^<>*' mprint;
*options ps=65 ls=180 nonumber formchar='|----|+\---+=|-^<>*' mprint orientation=landscape;

************************************************************;
* This is "code to create constucted vars - NIDDK rev.sas"
*
* CODE SUBMITTED BY A2ALL D.C.C. (T.Shearon) ON 5/6/10
* to create inclusion/exclusion indicators from raw variables in
* A2ALL raw legacy datasets
* NIDDK incorporated code into the current program to create
*
* output SAS dataset:
* \\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working archive\Analysis data
- by NIDDK\
* RECIP_ALL.SAS7BDAT
*
* SAS formats (value labels):
* Raw formats
* \\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working archive\Formats
* Analysis formats (for composite inclusion/exclusion variables):
* \\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working archive\Analysis
formats
*
* UPDATED:
* - 5/26/10
* TO INCORPORATE ADDITIONAL CODE RECEIVED FROM DCC
* to create MELD at Transplant AND Biliary anastomosis site category ***
*
* UPDATED:
* - 5/27/10
* TO INCORPORATE CODE that creates outcome variables in Tables 3, 4a, 4b
* of publication used for DSIC ***
*
* UPDATED:
* - 10/18/10
* TO RUN CODE on revised version of raw datasets received from DCC on 9/29/2010
************************************************************;

* raw A2ALL data submitted Sept 29 2010 *;
libname a2allrev '\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Data';

* A2ALL data formats submitted Sept 29 2010 *;
libname library '\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Formats';

* A2ALL analysis inclusion/exclusion formats submitted May 6 2010 (dgnformat.sas) *;
%include '\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Analysis formats\dgnformat - niddk.sas';

* output directory *;
libname a2anal '\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Analysis data - by NIDDK';

* inclusion/exclusion code starts here *;

%macro check6dgn(var,text);
   &var=(dL1=&text or dL2=&text or dL3=&text or
         dE1=&text or dE2=&text or dE3=&text) ;
%mend;

   *-------------------------------------------------------------------------------
   * Diagnoses at listing/enrollment
   *-------------------------------------------------------------------------------;

data recip_all; merge a2allrev.niddk_cdr_retro_rcp a2allrev.niddk_cdr_retro_rcp_srtr;
  by resp_id;

  * notes from T.Shearon, 5/6/10:  The first section of code creates diagnosis indicators
```

```
   at listing/enrollment (these are not mutually exclusive categories).
   I included all of them in case they might be useful for you later,
   although really only one is needed for the exclusions *;

   *-- DIAGNOSIS --*;
   *-- Patients can fall into more than 1 category HCC, HCV, alcohol, etc --*;
   dL1=put(RECIP_PRIMDX_LIST,$pdgn_HCC_HCV_ALC.);
   dL2=put(RECIP_SECDX_LIST,$pdgn_HCC_HCV_ALC.);
   dL3=put(RECIP_TERTDX_LIST,$pdgn_HCC_HCV_ALC.);
   dE1=put(RECIP_NEWPRIMDX_ENROLL,$pdgn_HCC_HCV_ALC.);
   dE2=put(RECIP_NEWSECONDX_ENROLL,$pdgn_HCC_HCV_ALC.);
   dE3=put(RECIP_NEWTERTDX_ENROLL,$pdgn_HCC_HCV_ALC.);
   dT1=put(RCT_PRDXCHANGE,$pdgn_HCC_HCV_ALC.);
   dT2=put(RCT_SEDXCHANGE,$pdgn_HCC_HCV_ALC.);
   dT3=put(RCT_TEDXCHANGE,$pdgn_HCC_HCV_ALC.);

   * AT LISTING OR ENROLLMENT *;
     * DO NOT COUNT AHN as a separate dgn group since fulminants excluded -- these are now in
with other (if they were not
       already in another group) --*;
   %check6dgn(recip_dgn_BilAtr_enr,'Liver : Biliary Atresia');
   %check6dgn(recip_dgn_chol_enr,'Liver : Cholestatic Liver Disease/Cirrho');
   %check6dgn(recip_dgn_Malig_nonHCC_enr,'Liver : Malignant Neoplasms, not HCC');
   %check6dgn(recip_dgn_Metab_enr,'Liver : Metabolic Diseases');
   %check6dgn(recip_dgn_othnoncc_enr,'Liver : Non-Chol Cirrhosis, not HCV/alch');
   %check6dgn(recip_dgn_alcoh_enr,'Liver : Alcohol');    * '4215'='LAENNECS CIRRHOSIS
(ALCOHOLIC)';

   *-- FOR HCC and HCV use 6 diagnoses + yes/no question at listing, enrollment --*;
   *'4400'='PRIMARY LIVER MALIGNANCY (PLM): HEPATOMA, HEPATOCELLULAR CARCINOMA (HCC)'
    '4401'='PLM: HEPATOMA (HCC) AND CIRRHOSIS';
   %check6dgn(recip_dgn_hcc1_enr,'Liver : HCC'); recip_DGN_HCC_enr=(recip_dgn_hcc1_enr=1 or
RECIP_HCC_LIST='1' or RECIP_HCC_ENROLL='1');

   *'4204'='CIRRHOSIS: POSTNECROTIC, TYPE C'
    '4216'='LAENNECS CIRRHOSIS AND POSTNECROTIC CIRRHOSIS TYPE C (CAH C)';
   %check6dgn(recip_dgn_hcv1_enr,'Liver : HCV'); recip_DGN_HCV_enr=(recip_dgn_hcv1_enr=1 or
RECIP_HCV_LIST='1' or RECIP_HCV_ENROLL='1');

  recip_dgn_other_enr=not(recip_dgn_BilAtr_enr or recip_dgn_chol_enr or
recip_dgn_Malig_nonHCC_enr or recip_dgn_Metab_enr or
                    recip_dgn_othnoncc_enr or recip_dgn_alcoh_enr or recip_dgn_hcc_enr or
recip_dgn_hcv_enr );

  label recip_dgn_BilAtr_enr='Recipient Any Dgn (list/enr): Biliary Atresia'

        recip_dgn_chol_enr='Recipient Any Dgn (list/enr): Cholestatic Liver Disease/Cirrho'

        recip_dgn_Malig_nonHCC_enr='Recipient Any Dgn (list/enr): Malignant Neoplasms other than
HCC'
        recip_dgn_Metab_enr='Recipient Any Dgn (list/enr): Metabolic Diseases'

        recip_dgn_othnoncc_enr='Recipient Any Dgn (list/enr): Non-Cholestatic Cirrhosis other
than HCV/alcohol'
        recip_DGN_HCV_enr="Recipient Any Dgn (list/enr): Hepatitis C"
        recip_DGN_HCC_enr="Recipient Any Dgn (list/enr): HCC"
        recip_DGN_alcoh_enr="Recipient Any Dgn (list/enr): Alcholic Cirrhosis"
        recip_DGN_other_enr="Recipient Any Dgn (list/enr): Other";


   *-------------------------------------------------------------------------------
   * EXCLUSIONS
   * notes from T.Shearon, 5/6/10: The second section has the exclusion criterion *;
   *-------------------------------------------------------------------------------;
   if SRTR_RECIP_status_list=6010  and recip_dgn_othnoncc_enr^=1 then delete;   *exclude all
fulminants (12);

   LDLT = (RIO_GRFTYP in ("4","5") and rio_proabort ne '1' and RCP_DOMINO ne 1) or
          (RIO_GRFTYP in ("4","5") and rio_proabort = '1' and rio_abortreas not in
```

```
('1','2','3','4'));

   * DDLT includes dominoes and splits, includes those with aborted procedures as long as it was
not due to donor reasons;
   DDLT = (RIO_GRFTYP in ("1","2","3") and rio_proabort ne '1' ) or
         (RIO_GRFTYP in ("4","5") and rio_proabort ne '1' and RCP_DOMINO=1) or
          (RIO_GRFTYP in ("4","5") and rio_proabort = '1'  and rio_abortreas not in
('1','2','3','4') and RCP_DOMINO=1) or
          (RIO_GRFTYP in ("1","2","3") and rio_proabort = '1' and rio_abortreas not in
('1','2','3','4'));

   * added by NIDDK 5/10/10: *;
   LABEL LDLT=EXCLUSION CRITERION
         DDLT=EXCLUSION CRITERION INCL DOMINOES AND SPLITS;
run;

* get freqs of inclusion/exclusion indicators *;
ods rtf file='\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Analysis data - by NIDDK\inc exc freqs.rtf' style=minimal;
title Frequencies of variables in dataset RECIP_ALL.SAS7BDAT;
proc freq; tables recip_dgn_BilAtr_enr--DDLT; run;
ods rtf close; run;

*************************************************************************;
**** UPDATE 5/26/10 TO INCORPORATE CODE RECEIVED FROM DCC ***;
**** TO CREATE MELD AT TRANSPLANT, AND Biliary Anastomosis Site Category ***;

**** We calculated MELD at transplant using the code below.
 MELD at enrollment was calculated the same way but we supplemented with SRTR data
 so the calculated variables already exist on the file.
 ---Tempie *** ;

DATA RECIP_ALL; SET RECIP_ALL;

  *-- MELD at transplant --*;
  * lower bound of 1.0 used for all components of MELD;

  if RCT_SCR   > . then MELD_txp_creat=max(RCT_SCR,1);
  if RCT_TBILI > . then MELD_txp_TBILI=max(RCT_TBILI,1);
  if RCT_INR   > . then MELD_txp_INR  =max(RCT_INR,1);

  *  for creat, upper bound is 4.0, also is 4.0 if patient is on dialysis;

  if RCT_DIALYZE="1" or MELD_txp_creat > 4 then MELD_txp_creat=4;
  if MELD_txp_creat>. and MELD_txp_TBILI>. and MELD_txp_INR>. then
      MELD_txp_RAW = (0.957*log(MELD_txp_creat)) + (0.378*log(MELD_txp_TBILI)) +
(1.120*log(MELD_txp_INR));
  if MELD_txp_RAW>. then do;
      MELD_txp =(min(40,(round(MELD_txp_RAW+0.643,.1)*10)));
      MELD_txp_SCORE_MISSING=0;
  end;
  else MELD_txp_SCORE_MISSING=1;
  label MELD_txp="MELD at transplant (max 40)"
        MELD_txp_SCORE_MISSING="1 if MELD at txp missing creat/INR/bili";

*** Feel free to ask as many questions you need to -- I know it can be confusing.
       The variables you want are RIO_BILANASTNO and BIL_ANAS_SITE_1, BIL_ANAS_SITE_2, and
       BIL_ANAS_SITE_3 on the recipient file.
    These come from the recipient intraop form.  I've included code below.
---Tempie ***;

                * dictomize ALL ROUX vs. Not-ALL ROUX;
                if RIO_BILANASTNO=1 then do;
                                if BIL_ANAS_SITE_1 in ("2", "6", "91") then BIL_ANAS_SITE_cat=1;
*ROUX";
                                else BIL_ANAS_SITE_cat=0; *Non_ROUX; *ref;
                end;
                else if RIO_BILANASTNO=2 then do;
                                if BIL_ANAS_SITE_1 in ("2", "6", "91") and BIL_ANAS_SITE_2 in
```

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("2", "6", "91") then BIL_ANAS_SITE_cat=1;
                                else BIL_ANAS_SITE_cat=0;
                end;
                else if RIO_BILANASTNO=3 then do;
                                if BIL_ANAS_SITE_1 in ("2", "6", "91") and BIL_ANAS_SITE_2 in
("2", "6", "91") and BIL_ANAS_SITE_3 in ("2", "6", "91")
                                then BIL_ANAS_SITE_cat=1;
                                else BIL_ANAS_SITE_cat=0;
                end;
                else if RIO_BILANASTNO=4 then do;
                                if BIL_ANAS_SITE_1 in ("2", "6", "91") and BIL_ANAS_SITE_2 in
("2", "6", "91") and BIL_ANAS_SITE_3 in ("2", "6", "91")
                                and BIL_ANAS_SITE_4 in ("2", "6", "91") then
BIL_ANAS_SITE_cat=1;
                                else BIL_ANAS_SITE_cat=0;
                end;
                else if RIO_BILANASTNO=5 then do;
                                if BIL_ANAS_SITE_1 in ("2", "6", "91") and BIL_ANAS_SITE_2 in
("2", "6", "91") and BIL_ANAS_SITE_3 in ("2", "6", "91")
                                and BIL_ANAS_SITE_4 in ("2", "6", "91") and BIL_ANAS_SITE_5 in
("2", "6", "91") then BIL_ANAS_SITE_cat=1;
                                else BIL_ANAS_SITE_cat=0;
                end;
                label BIL_ANAS_SITE_cat="Biliary anastomosis site category: 1=ALL ROUX,
0=Not-ALL ROUX";
RUN;

* get freqs of new variables *;
ods rtf file='\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Analysis data - by NIDDK\meld-txp bil freqs.rtf' style=minimal;
title A2ALL RECIP_ALL -- meld-txp bile freqs;
PROC FREQ DATA=RECIP_ALL;TABLES
MELD_txp
MELD_txp_SCORE_MISSING
BIL_ANAS_SITE_cat; RUN;
PROC MEANS DATA=RECIP_ALL; VAR MELD_txp_creat
MELD_txp_TBILI
MELD_txp_INR
MELD_txp_RAW; RUN;
ods rtf close; run;


*************************************************************************;
**** UPDATE 5/27/10 TO INCORPORATE CODE RECEIVED FROM DCC ***;
**** TO CREATE OUTCOME VARIABLES REPORTED ON IN DSIC PUBLICATION TABLE 3,4A,4B;

DATA RECIP_ALL; SET RECIP_ALL;
*-------------------------------------------------------------------------------------
* Variables for Table 3;
*-------------------------------------------------------------------------------------;
*-- Count all complications:
       r_COMP1 = list complications with corresponding Complication Severity form --
complication is yes if value=1
                   (RMOR_GIBLD is complication if value=1 or 2 but new variable created so it
can be combined with those which are complications only for value=1)
       r_COMP2 and r_COMP3 = complications with no CS form (will not be able to grade these
fully)
                (r_COMP2 are complications if value=1, r_COMP3 are complications if value ne ' '
--*;
*-- Grade only those complications with a CS form: r_comp1 --*;

       if RMOR_GIBLD in ("1", "2") then RMOR_GIBLD_2="1"; else if RMOR_GIBLD ="3" then
RMOR_GIBLD_2="2"; else RMOR_GIBLD=" ";
       array r_comp1{18}   RMOR_BILE           RMOR_STRICT         RMOR_ABBLD
RMOR_GIBLD_2        RMOR_ABSCESS  RMOR_ILEUS
                                        RMOR_BOWEL          RMOR_REEXPLORE      RMOR_ENCEPH
RMOR_ASCITES        RMOR_HAT            RMOR_PVT
                                        RMOR_IVCT           RMOR_CR             RMOR_RECUR
       /*RMOR_RETXP: not a complication*/RMOR_DVT
```

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                                        RMOR_NEURAPRAX      RMOR_INFECT;

      array r_comp2              RMOR_SURGCOMP       RMOR_MI             RMOR_CHF
RMOR_PNEUMO   RMOR_PLEUR         RMOR_PEDEM
                                        RMOR_CPR            RMOR_RESP           RMOR_ASPIR
      RMOR_PE             RMOR_DEHISC   RMOR_HERNIA
                                        RMOR_OTHER;

      array r_comp3              RMOR_BWOUND   RMOR_BBILE          RMOR_BBLOOD   RMOR_BLIV
      RMOR_BPULM          RMOR_BCNS     RMOR_BUTI
                                        RMOR_VWOUND   RMOR_VBILE          RMOR_VBLOOD   RMOR_VLIV
            RMOR_VPULM          RMOR_VCNS     RMOR_VUTI
                                        RMOR_FWOUND   RMOR_FBILE          RMOR_FBLOOD   RMOR_FLIV
            RMOR_FPULM          RMOR_FCNS     RMOR_FUTI;

      r_tot_comp=0;
      do i=1 to 18;
         if r_comp1{i}="1" then r_tot_comp=r_tot_comp+1;
      end;
      do over r_comp2;
         if r_comp2="1" then r_tot_comp=r_tot_comp+1;
      end;
      do over r_comp3;
         if r_comp3 ne " " then r_tot_comp=r_tot_comp+1;
      end;
      label r_tot_comp="Number of complications (including comp. that can be graded and those
that cannot be graded) for each txped recipient";

      Number_of_Complications=r_tot_comp; *re-name just for Figure 1 histogram's legend;

      *collapse r_tot_comp in different ways;
      if r_tot_comp ge 6 then r_tot_comp_cat=7; else r_tot_comp_cat=r_tot_comp;
      if r_tot_comp ge 10 then r_tot_comp_cat2=11; else r_tot_comp_cat2=r_tot_comp;

      if r_tot_comp ge 1 then r_tot_comp_cat3=1; else r_tot_comp_cat3=0;
      if r_tot_comp ge 6 then r_tot_comp_cat4=1; else r_tot_comp_cat4=0;
      label r_tot_comp_cat3="if any complication"
              r_tot_comp_cat4="if >= 6 complications";

*-------------------------------------------------------------------------------------
* Variables for Table 4A;
*-------------------------------------------------------------------------------------;
      *create new var r_any_bacte, r_any_viral, and r_any_fungl for total number of patients
with at least one bacterial/viral/fungal infections in Table 2A;
      array r_comp_bacte  RMOR_BWOUND   RMOR_BBILE          RMOR_BBLOOD   RMOR_BLIV
RMOR_BPULM          RMOR_BCNS     RMOR_BUTI;
      array r_comp_viral  RMOR_VWOUND   RMOR_VBILE          RMOR_VBLOOD   RMOR_VLIV
RMOR_VPULM          RMOR_VCNS     RMOR_VUTI;
      array r_comp_fungl  RMOR_FWOUND   RMOR_FBILE          RMOR_FBLOOD   RMOR_FLIV
RMOR_FPULM          RMOR_FCNS     RMOR_FUTI;

      r_any_bacte=0; r_any_viral=0; r_any_fungl=0;
      do over r_comp_bacte;
       if r_comp_bacte ne " " then r_any_bacte=1;
      end;
      do over r_comp_viral;
       if r_comp_viral ne " " then r_any_viral=1;
      end;
      do over r_comp_fungl;
       if r_comp_fungl ne " " then r_any_fungl=1;
      end;
      label r_any_bacte="pts with at least one bacterial infection";
      label r_any_viral="pts with at least one viral infection";
      label r_any_fungl="pts with at least one fungal infection";


      if RMOR_REEXPLORE in ("1", "2") then Reexplore_new=1;
      else if RMOR_REEXPLORE="3" then Reexplore_new=0;
      else if RMOR_REEXPLORE=" " then Reexplore_new=" ";
```

```
*-------------------------------------------------------------------------------
* Variables for Table 4B;
*-------------------------------------------------------------------------------;
*-- Clavien grade:
      - death, txp, disab, hosp14, icu, and onset are variables on each complication form;

array r_grade{18}   RBLCS_GRADE         RBSCS_GRADE         RABCS_GRADE         RGIBCS_GRADE
      RAACS_GRADE         RICS_GRADE
                                  RBOCS_GRADE         RRECS_GRADE   RECS_GRADE
RASCCS_GRADE        RHATCS_GRADE  RPVTCS_GRADE
                                  RIVCTCS_GRADE       RCRCS_GRADE         RRECCS_GRADE
/*RLTCS_GRADE: RMOR_RETXP is not a compliation*/            RDVTCS_GRADE  RNCS_GRADE
                                  RINFCS_GRADE;
array r_death{18}   RBLCS_DEATH         RBSCS_DEATH         RABCS_DEATH         RGIBCS_DEATH
      RAACS_DEATH         RICS_DEATH
                                  RBOCS_DEATH         RRECS_DEATH   RECS_DEATH
RASCCS_DEATH  RHATCS_DEATH  RPVTCS_DEATH
                                  RIVCTCS_DEATH       RCRCS_DEATH         RRECCS_DEATH
/*RLTCS_DEATH: RMOR_RETXP is not a compliation*/            RDVTCS_DEATH  RNCS_DEATH
                                  RINFCS_DEATH;
array r_txp{18}     RBLCS_RETXP         RBSCS_RETXP         RABCS_RETXP         RGIBCS_RETXP
      RAACS_RETXP         RICS_RETXP
                                  RBOCS_RETXP         RRECS_RETXP   RECS_RETXP
RASCCS_RETXP  RHATCS_RETXP  RPVTCS_RETXP
                                  RIVCTCS_RETXP       RCRCS_RETXP   RRECCS_RETXP
/*RLTCS_RETXP: RMOR_RETXP is not a compliation*/            RDVTCS_RETXP  RNCS_RETXP
                                  RINFCS_RETXP;
array r_disab{18}   RBLCS_RESIDISABLE         RBSCS_RESIDISABLE   RABCS_RESIDISABLE
RGIBCS_RESIDISABLE  RAACS_RESIDISABLE   RICS_RESIDISABLE
                                  RBOCS_RESIDISABLE         RRECS_RESIDISABLE   RECS_RESIDISABLE
      RASCCS_RESIDISABLE  RHATCS_RESIDISABLE  RPVTCS_RESIDISABLE
                                  RIVCTCS_RESIDISABLE       RCRCS_RESIDISABLE
RRECCS_RESIDISABLE  /*RLTCS_RESIDISABLE: RMOR_RETXP is not a compliation*/
                                  RDVTCS_RESIDISABLE        RNCS_RESIDISABLE
RINFCS_RESIDISABLE;
array r_hosp_4wk_14d{18}   RBLCS_LONGSTAY             RBSCS_LONGSTAY      RABCS_LONGSTAY
RGIBCS_LONGSTAY     RAACS_LONGSTAY             RICS_LONGSTAY
                                        RBOCS_LONGSTAY             RRECS_LONGSTAY
RECS_LONGSTAY       RASCCS_LONGSTAY     RHATCS_LONGSTAY            RPVTCS_LONGSTAY
                                        RIVCTCS_LONGSTAY    RCRCS_LONGSTAY
RRECCS_LONGSTAY     /*RLTCS_LONGSTAY: RMOR_RETXP is not a compliation*/
                                        RDVTCS_LONGSTAY            RNCS_LONGSTAY
RINFCS_LONGSTAY;
array r_icu_5d{18}  RBLCS_ICUDAMIT             RBSCS_ICUDAMIT      RABCS_ICUDAMIT
RGIBCS_ICUDAMIT           RAACS_ICUDAMIT             RICS_ICUDAMIT
                                  RBOCS_ICUDAMIT             RRECS_ICUDAMIT      RECS_ICUDAMIT
      RASCCS_ICUDAMIT     RHATCS_ICUDAMIT            RPVTCS_ICUDAMIT
                                  RIVCTCS_ICUDAMIT    RCRCS_ICUDAMIT      RRECCS_ICUDAMIT
/*RLTCS_ICUDAMIT: RMOR_RETXP is not a compliation*/         RDVTCS_ICUDAMIT
RNCS_ICUDAMIT
                                  RINFCS_ICUDAMIT;
array r_med{18}     RBLCS_TXMED   RBSCS_TXMED         RABCS_TXMED               RGIBCS_TXMED
            RAACS_TXMED               RICS_TXMED
                                  RBOCS_TXMED         RRECS_TXMED         RECS_TXMED
      RASCCS_TXMED                RHATCS_TXMED        RPVTCS_TXMED
                                  RIVCTCS_TXMED       RCRCS_TXMED         RRECCS_TXMED
      /*RLTCS_TXMED: RMOR_RETXP is not a compliation*/                    RDVTCS_TXMED
RNCS_TXMED
                                  RINFCS_TXMED;
array r_medtype{18} RBLCS_TXMEDTYPE     RBSCS_TXMEDTYPE           RABCS_TXMEDTYPE
      RGIBCS_TXMEDTYPE            RAACS_TXMEDTYPE                 RICS_TXMEDTYPE
                                  RBOCS_TXMEDTYPE           RRECS_TXMEDTYPE           RECS_TXMED
TYPE                RASCCS_TXMEDTYPE          RHATCS_TXMEDTYPE          RPVTCS_TXMEDTYPE
                                  RIVCTCS_TXMEDTYPE   RCRCS_TXMEDTYPE           RRECCS_TXMEDTYPE
            /*RLTCS_TXMEDTYPE: RMOR_RETXP is not a compliation*/
                                  RDVTCS_TXMEDTYPE    RNCS_TXMEDTYPE
RINFCS_TXMEDTYPE;
array r_transfuse{18}      RBLCS_TRANSFUSE           RBSCS_TRANSFUSE           RABCS_TRANSFUSE
            RGIBCS_TRANSFUSE    RAACS_TRANSFUSE           RICS_TRANSFUSE
```

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                                    RBOCS_TRANSFUSE          RRECS_TRANSFUSE          REC
S_TRANSFUSE         RASCCS_TRANSFUSE    RHATCS_TRANSFUSE    RPVTCS_TRANSFUSE
                                    RIVCTCS_TRANSFUSE   RCRCS_TRANSFUSE          RRECCS_TRA
NSFUSE       /*RLTCS_TRANSFUSE: RMOR_RETXP is not a compliation*/
                                    RDVTCS_TRANSFUSE    RNCS_TRANSFUSE
RINFCS_TRANSFUSE;
array r_bldunit{18} RBLCS_PRBC          RBSCS_PRBC          RABCS_PRBC
RGIBCS_PRBC         RAACS_PRBC          RICS_PRBC
                                RBOCS_PRBC          RRECS_PRBC          RECS_PRBC
      RASCCS_PRBC         RHATCS_PRBC         RPVTCS_PRBC
                                RIVCTCS_PRBC RCRCS_PRBC          RRECCS_PRBC
/*RLTCS_PRBC: RMOR_RETXP is not a compliation*/                   RDVTCS_PRBC         RNCS_PRBC
                                RINFCS_PRBC;
array r_proc{18}    RBLCS_PROCEDURE          RBSCS_PROCEDURE          RABCS_PROCEDURE
      RGIBCS_PROCEDURE    RAACS_PROCEDURE          RICS_PROCEDURE
                                RBOCS_PROCEDURE          RRECS_PROCEDURE          RECS_PROCE
DURE          RASCCS_PROCEDURE    RHATCS_PROCEDURE    RPVTCS_PROCEDURE
                                RIVCTCS_PROCEDURE   RCRCS_PROCEDURE          RRECCS_PROCEDURE
      /*RLTCS_PROCEDURE: RMOR_RETXP is not a compliation*/        RDVTCS_PROCEDURE
RNCS_PROCEDURE
                                RINFCS_PROCEDURE;
array r_proctype{18}       RBLCS_PROCTYPE           RBSCS_PROCTYPE           RABCS_PROCTYPE
            RGIBCS_PROCTYPE          RAACS_PROCTYPE          RICS_PROCTYPE
                                RBOCS_PROCTYPE          RRECS_PROCTYPE          REC
S_PROCTYPE          RASCCS_PROCTYPE          RHATCS_PROCTYPE          RPVTCS_PROCTYPE
                                RIVCTCS_PROCTYPE    RCRCS_PROCTYPE
RRECCS_PROCTYPE     /*RLTCS_PROCTYPE: RMOR_RETXP is not a compliation*/         RDVTCS_PROCTYPE
            RNCS_PROCTYPE
                                RINFCS_PROCTYPE;
array r_onset{18}  RBLCS_ONSETDATE          RBSCS_ONSETDATE     RABCS_ONSETDATE
RGIBCS_ONSETDATE    RAACS_ONSETDATE          RICS_ONSETDATE
                                RBOCS_ONSETDATE          RRECS_ONSETDATE     RECS_ONSETDATE
            RASCCS_ONSETDATE    RHATCS_ONSETDATE    RPVTCS_ONSETDATE
                                RIVCTCS_ONSETDATE   RCRCS_ONSETDATE     RRECCS_ONSETDATE
/*RLTCS_ONSETDATE: RMOR_RETXP is not a compliation*/        RDVTCS_ONSETDATE    RNCS_ONSETDATE
                                RINFCS_ONSETDATE;
*array r_hosp_icu_days{24} RECIP_HOSP_ICUDAY          RECIP_HOSP_ICUDAY_2
RECIP_HOSP_ICUDAY_3        RECIP_HOSP_ICUDAY_4        RECIP_HOSP_ICUDAY_5
                                    RECIP_HOSP_ICUDAY_6        RECIP_HOSP_ICUDAY_7
      RECIP_HOSP_ICUDAY_8        RECIP_HOSP_ICUDAY_9        RECIP_HOSP_ICUDAY_10
                                    RECIP_HOSP_ICUDAY_51063    RECIP_HOSP_ICUDAY_51070
      RECIP_HOSP_ICUDAY_51077    RECIP_HOSP_ICUDAY_51084    RECIP_HOSP_ICUDAY_51091
                                    RECIP_HOSP_ICUDAY_51098    RECIP_HOSP_ICUDAY_51105
      RECIP_HOSP_ICUDAY_51112    RECIP_HOSP_ICUDAY_51119    RECIP_HOSP_ICUDAY_511126
                                    RECIP_HOSP_ICUDAY_52336    RECIP_HOSP_ICUDAY_52343
      RECIP_HOSP_ICUDAY_52350    RECIP_HOSP_ICUDAY_52357;

    do i=1 to 18;
            if r_comp1{i}="1" then do;
                  if r_death{i}="1" or r_txp{i}="1" then r_grade{i}=4;
            else if r_disab{i}="1" then r_grade{i}=3;
            else if r_icu_5d{i}="1" or r_hosp_4wk_14d{i}="1" or (r_med{i}="1" and r_medtype{i}
in ("2", "3", "4")) or
                                (r_transfuse{i}="1" and r_bldunit{i}>3) or (r_proc{i}="1" and
r_proctype{i} in ("2", "3", "4"))
                          then r_grade{i}=2;
             else r_grade{i}=1;
            end;
      end;

      * for complications of grade 4, do chi-square test by LDLT;
      array r_grade4{18}  RBLCS_GRADE4 RBSCS_GRADE4 RABCS_GRADE4 RGIBCS_GRADE4
RAACS_GRADE4 RICS_GRADE4
                                RBOCS_GRADE4 RRECS_GRADE4        RECS_GRADE4
RASCCS_GRADE4       RHATCS_GRADE4       RPVTCS_GRADE4
                                RIVCTCS_GRADE4      RCRCS_GRADE4 RRECCS_GRADE4
/*RLTCS_GRADE: RMOR_RETXP is not a compliation*/
                                RDVTCS_GRADE4       RNCS_GRADE4         RINFCS_GRADE4;
      do i=1 to 18;
```

```
            if r_grade{i}=4 then r_grade4{i}=1; else r_grade4{i}=0;
      end;

      * for any graded complications, do chi-square test by LDLT;
      array r_grade_any{18}      RBLCS_GRADE_any     RBSCS_GRADE_any           RABCS_GRADE_any
            RGIBCS_GRADE_any    RAACS_GRADE_any           RICS_GRADE_any
                                          RBOCS_GRADE_any           RRECS_GRADE_any
RECS_GRADE_any             RASCCS_GRADE_any    RHATCS_GRADE_any    RPVTCS_GRADE_any
                                          RIVCTCS_GRADE_any   RCRCS_GRADE_any           RRE
CCS_GRADE_any       /*RLTCS_GRADE: RMOR_RETXP is not a compliation*/
                                          RDVTCS_GRADE_any    RNCS_GRADE_any
RINFCS_GRADE_any;
      do i=1 to 18;
            if r_grade{i} in (1, 2, 3, 4) then r_grade_any{i}=1; else r_grade_any{i}=0;
      end;


      * Find: within grade 4 how many complications had led to re-txp or death;
      r_retxp=0; r_dead=0;
      do i=1 to 18;
            if r_comp1{i}="1" then do;
                  if r_txp{i}="1" then r_retxp=1;
                  if r_death{i}="1" then r_dead=1;
            end;
      end;
      label r_retxp="Any complication that led to re-txp";
      label r_dead="Any complication that led to death";

      * combine RMOR_BILE and RMOR_STRICT;
      if RMOR_BILE="1" or RMOR_STRICT="1" then Rmor_BL_BS=1;
      else if RMOR_BILE="2" and RMOR_STRICT="2" then Rmor_BL_BS=0;
      else Rmor_BL_BS= . ;
      label Rmor_BL_BS="At least one bile complications";

      if RBLCS_GRADE=4 or RBSCS_GRADE=4 then RBL_BS_grade=4;
      else if RBLCS_GRADE=3 or RBSCS_GRADE=3 then RBL_BS_grade=3;
      else if RBLCS_GRADE=2 or RBSCS_GRADE=2 then RBL_BS_grade=2;
      else if RBLCS_GRADE=1 or RBSCS_GRADE=1 then RBL_BS_grade=1;
      else RBL_BS_grade=0;
      label RBL_BS_grade="Clavien grade for combined bile complications";
      /* The code above can be simplified as:
      RBL_BS_grade=max(RBLCS_GRADE, RBSCS_GRADE);
      if RBL_BS_grade=. then RBL_BS_grade=0;*/

      if RBL_BS_grade=4 then RBL_BS_grade4=1; else RBL_BS_grade4=0;
      label RBL_BS_grade4="Grade 4 bile complications: 1=yes, 0=no";

      if RBL_BS_grade in (1, 2, 3, 4) then RBL_BS_grade_any=1; else RBL_BS_grade_any=0;
      label RBL_BS_grade_any="Any grade of bile complications: 1=yes, 0=no";

      * combine RMOR_HAT and RMOR_PVT and RMOR_IVCT;
      if RMOR_HAT="1" or RMOR_PVT="1" or RMOR_IVCT="1" then Rmor_VSCL=1; else Rmor_VSCL=0;
      label Rmor_VSCL="At least one of RMOR_HAT or RMOR_PVT or RMOR_IVCT";

      if RHATCS_GRADE=4 or RPVTCS_GRADE=4 or RIVCTCS_GRADE=4 then RVSCL_grade=4;
      else if RHATCS_GRADE=3 or RPVTCS_GRADE=3 or RIVCTCS_GRADE=3 then RVSCL_grade=3;
      else if RHATCS_GRADE=2 or RPVTCS_GRADE=2 or RIVCTCS_GRADE=2 then RVSCL_grade=2;
      else if RHATCS_GRADE=1 or RPVTCS_GRADE=1 or RIVCTCS_GRADE=1 then RVSCL_grade=1;
      else RVSCL_grade=0;
      label RVSCL_grade="Clavien grade for combined vascular complications";

      if RVSCL_grade=4 then RVSCL_grade4=1; else RVSCL_grade4=0;
      label RVSCL_grade4="Grade 4 combined vascular complications: 1=yes, 0=no";

      if RVSCL_grade in (1, 2, 3, 4) then RVSCL_grade_any=1; else RVSCL_grade_any=0;
      label RVSCL_grade_any="Any Grade grade of combined vascular complications: 1=yes, 0=no";
RUN;

* get freqs of new variables *;
```

```
   ods rtf file='\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
   archive\Analysis data - by NIDDK\outcomes T3 T4ab freqs.rtf' style=minimal;
   title A2ALL RECIP_ALL, freqs for vars in TABLE 3,4A,& 4B;
   PROC FREQ DATA=RECIP_ALL;TABLES
   RMOR_GIBLD_2--RVSCL_grade_any; RUN;
   ods rtf close; run;

   * compare to previously saved dataset *;
   libname old '\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
   archive\Analysis data - by NIDDK\boneyard 5-27-10';
   ods rtf file='\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
   archive\Analysis data - by NIDDK\compare prev with current data.rtf' style=minimal;
   title Compare A2ALL transformed recip dataset from 5/27/10 with current 10/18/10;
   PROC COMPARE BASE=old.RECIP_ALL COMPARE=RECIP_ALL LISTOBS LISTVAR maxprint=(400,32000); ID
   RESP_ID; RUN;
   ods rtf close; run;

   * get contents listing for new dataset *;
   ods rtf file='\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
   archive\Analysis data - by NIDDK\dataset contents.rtf' style=minimal;
   proc contents position data=recip_all; title CONTENTS OF RECIP_ALL DATASET WITH ADDITIONAL
   VARIABLE CODE;
   RUN;
   ods rtf close; run;

   * save dataset *;
* previous version saved in boneyard 5-27-10 subdirectory *;
DATA A2ANAL.RECIP_ALL; SET RECIP_ALL; RUN;

* export saved dataset to Stata (use SAS v9.2...) *;
* note:  only numeric date labels will transfer at this time, Stata does not take character labels
*;

PROC EXPORT DATA= A2ANAL.RECIP_ALL
            OUTFILE= "\\rcdubuntu01.rtp.rti.org\niddk\03_Data_And_Tools\Studies\A2ALL\working
archive\Analysis data - by NIDDK\Stata\recip_all.dta"
            DBMS=STATA REPLACE;
RUN;
```

APPENDIX C

Stata Output for DSIC ANALYSES

```
-------------------------------------------------------------------------------
      name:  <unnamed>
       log:  C:\A2ALL_Files_No_Data_MASTER\NEW_Oct_2010\DSIC_New_v13.log
  log type:  text
 opened on:  18 Oct 2010, 18:49:52

. gen rawdate =  don_hp_date

. sort rawdate

. list rawdate don_hp_date in 1/10

     +---------------------+
     | rawdate   don_hp_~e |
     |---------------------|
  1. |   13921   11 Feb 98 |
  2. |   13970   01 Apr 98 |
  3. |   13982   13 Apr 98 |
  4. |   14012   13 May 98 |
  5. |   14027   28 May 98 |
     |---------------------|
  6. |   14035   05 Jun 98 |
  7. |   14038   08 Jun 98 |
  8. |   14039   09 Jun 98 |
  9. |   14053   23 Jun 98 |
 10. |   14070   10 Jul 98 |
     +---------------------+

. drop if rawdate > 15764
(8 observations deleted)

. tab don_hp_date in 1/10

     27847: |
  donor h&p |
       date |      Freq.     Percent        Cum.
------------+-----------------------------------
  11 Feb 98 |          1       10.00       10.00
  01 Apr 98 |          1       10.00       20.00
  13 Apr 98 |          1       10.00       30.00
  13 May 98 |          1       10.00       40.00
  28 May 98 |          1       10.00       50.00
  05 Jun 98 |          1       10.00       60.00
  08 Jun 98 |          1       10.00       70.00
  09 Jun 98 |          1       10.00       80.00
  23 Jun 98 |          1       10.00       90.00
  10 Jul 98 |          1       10.00      100.00
------------+-----------------------------------
      Total |         10      100.00

. tab don_hp_date if rawdate > 15755

     27847: |
  donor h&p |
       date |      Freq.     Percent        Cum.
------------+-----------------------------------
  24 Feb 03 |          2       40.00       40.00
  25 Feb 03 |          2       40.00       80.00
  26 Feb 03 |          1       20.00      100.00
------------+-----------------------------------
      Total |          5      100.00

.
```

```
. generate missing_don_hp_date = 0

. replace missing_don_hp_date = 1 if don_hp_date == .
(0 real changes made)

. tab missing_don_hp_date

missing_don |
   _hp_date |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        799      100.00      100.00
------------+-----------------------------------
      Total |        799      100.00

.
. tab ldlt ddlt, missing

           |  exclusion criterion
           |   incl dominoes and
 exclusion |         splits
 criterion |         0          1 |     Total
-----------+----------------------+----------
         0 |       200        216 |       416
         1 |       383          0 |       383
-----------+----------------------+----------
     Total |       583        216 |       799


. generate group =  (10*ddlt) + ldlt

. recode group ( 0 = .)
(group: 200 changes made)

. label define group 10"DDLT" 1"LDLT"

. label values group group

. tab group, missing

      group |      Freq.     Percent        Cum.
------------+-----------------------------------
       LDLT |        383       47.93       47.93
       DDLT |        216       27.03       74.97
          . |        200       25.03      100.00
------------+-----------------------------------
      Total |        799      100.00

. list resp_id group ldlt ddlt gout_txp if group==. & gout_txp ~= .

     +-------------------------------------------+
     | resp_id   group   ldlt   ddlt    gout_txp |
     |-------------------------------------------|
243. |    2331       .      0      0   11 Jan 01 |
784. |    4168       .      0      0   29 May 03 |
     +-------------------------------------------+

. drop if group == .
(200 observations deleted)

. tab group, missing

      group |      Freq.     Percent        Cum.
------------+-----------------------------------
       LDLT |        383       63.94       63.94
       DDLT |        216       36.06      100.00
```

```
------------+-----------------------------------
      Total |        599      100.00

.
. gen year_transplant = yofd(gout_txp)
(2 missing values generated)

. gen year_birth = enr_yob

. gen age_at_transplant = year_transplant - year_birth
(2 missing values generated)

.
. list enr_yob gout_txp age_at_transplant in 1/10

     +---------------------------------+
     | enr_yob    gout_txp   age_at~t |
     |---------------------------------|
  1. |    1939   28 May 98         59 |
  2. |    1974   02 Sep 98         24 |
  3. |    1938   23 Sep 98         60 |
  4. |    1954   03 Jun 98         44 |
  5. |    1961   08 Jul 98         37 |
     |---------------------------------|
  6. |    1948   22 Jun 98         50 |
  7. |    1979   17 Jun 98         19 |
  8. |    1937   04 Aug 98         61 |
  9. |    1967   29 Jul 98         31 |
 10. |    1965   24 May 98         33 |
     +---------------------------------+

. list enr_yob gout_txp age_at_transplant in 500/510

     +---------------------------------+
     | enr_yob    gout_txp   age_at~t |
     |---------------------------------|
500. |    1950   28 May 02         52 |
501. |    1962   10 Jul 02         40 |
502. |    1965   01 May 03         38 |
503. |    1945   27 Jun 02         57 |
504. |    1947   22 May 02         55 |
     |---------------------------------|
505. |    1956   05 Jun 02         46 |
506. |    1957   09 Sep 02         45 |
507. |    1953   12 Jul 02         49 |
508. |    1950   29 Nov 02         52 |
509. |    1949   09 May 03         54 |
     |---------------------------------|
510. |    1973   01 Nov 02         29 |
     +---------------------------------+

.
. tab age_at_transplant

age_at_tran |
     splant |      Freq.     Percent        Cum.
------------+-----------------------------------
         18 |          1        0.17        0.17
         19 |          3        0.50        0.67
         20 |          2        0.34        1.01
         21 |          2        0.34        1.34
         22 |          2        0.34        1.68
         23 |          2        0.34        2.01
         24 |          3        0.50        2.51
         25 |          4        0.67        3.18
```

```
         26 |          1        0.17        3.35
         27 |          1        0.17        3.52
         28 |          2        0.34        3.85
         29 |          5        0.84        4.69
         30 |          6        1.01        5.70
         31 |          4        0.67        6.37
         32 |          5        0.84        7.20
         33 |          5        0.84        8.04
         34 |          5        0.84        8.88
         35 |          5        0.84        9.72
         36 |          4        0.67       10.39
         37 |          8        1.34       11.73
         38 |          5        0.84       12.56
         39 |          3        0.50       13.07
         40 |          8        1.34       14.41
         41 |          6        1.01       15.41
         42 |         15        2.51       17.92
         43 |         16        2.68       20.60
         44 |         17        2.85       23.45
         45 |         18        3.02       26.47
         46 |         29        4.86       31.32
         47 |         20        3.35       34.67
         48 |         21        3.52       38.19
         49 |         24        4.02       42.21
         50 |         28        4.69       46.90
         51 |         27        4.52       51.42
         52 |         26        4.36       55.78
         53 |         24        4.02       59.80
         54 |         30        5.03       64.82
         55 |         23        3.85       68.68
         56 |         20        3.35       72.03
         57 |         17        2.85       74.87
         58 |         24        4.02       78.89
         59 |         17        2.85       81.74
         60 |         23        3.85       85.59
         61 |         13        2.18       87.77
         62 |         10        1.68       89.45
         63 |         14        2.35       91.79
         64 |          9        1.51       93.30
         65 |         11        1.84       95.14
         66 |          3        0.50       95.64
         67 |         12        2.01       97.65
         68 |          2        0.34       97.99
         69 |          3        0.50       98.49
         70 |          2        0.34       98.83
         71 |          3        0.50       99.33
         72 |          2        0.34       99.66
         73 |          1        0.17       99.83
         74 |          1        0.17      100.00
------------+-----------------------------------
      Total |        597      100.00

. bysort group: summarize age_at_transplant

------------------------------------------------------------------------------
---
-> group = LDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
age_at_tra~t |       382    49.54188    10.68627         18         73

------------------------------------------------------------------------------
---
-> group = DDLT
```

```
    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
age_at_tra~t |       215        51.6    9.765378         20         74


. * pause
.
. destring recipient_ethnicity recipient_race enr_gender, replace
recipient_ethnicity has all characters numeric; replaced as byte
recipient_race has all characters numeric; replaced as int
enr_gender has all characters numeric; replaced as byte

.
. label define enr_gender 1"Male" 2"Female"

. label values enr_gender enr_gender

.
. label define recipient_ethnicity 1"Hispanic" 2"Non-Hispanic"

. label values recipient_ethnicity recipient_ethnicity

. tab recipient_ethnicity

      27742: |
   recipient |
   ethnicity |      Freq.     Percent        Cum.
-------------+-----------------------------------
    Hispanic |        116       19.37       19.37
Non-Hispanic |        483       80.63      100.00
-------------+-----------------------------------
       Total |        599      100.00

.
. label define recipient_race 128 "Hawaii/PI" 16 "Black" 256 "Mid-Eastern" 32
"Am
>  Indian/Alaskan" 64"Asian" 8"White"

. label values recipient_race recipient_race

.
. generate recipient_race2 = recipient_race

. recode recipient_race2 (32=99) (128=99) (256=99) (32=99)
(recipient_race2: 15 changes made)

. label define recipient_race2 16 "Black" 64"Asian" 8"White" 99"Other"

. label values recipient_race2 recipient_race2

.
. tab recipient_race recipient_race2

 27743: recipient |               recipient_race2
             race |     White      Black      Asian      Other |     Total
------------------+----------------------------------------------+----------
            White |       537          0          0          0 |       537
            Black |         0         25          0          0 |        25
Am Indian/Alaskan |         0          0          0          2 |         2
            Asian |         0          0         22          0 |        22
        Hawaii/PI |         0          0          0          4 |         4
      Mid-Eastern |         0          0          0          9 |         9
------------------+----------------------------------------------+----------
            Total |       537         25         22         15 |       599
```

```
.
. tab group, missing

      group |      Freq.     Percent        Cum.
------------+-----------------------------------
       LDLT |        383       63.94       63.94
       DDLT |        216       36.06      100.00
------------+-----------------------------------
      Total |        599      100.00

. drop if group ==.
(0 observations deleted)

.
. tab enr_gender group, col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    40212: |         group
    gender |      LDLT       DDLT |     Total
-----------+----------------------+----------
      Male |       221        128 |       349
           |     57.70      59.26 |     58.26
-----------+----------------------+----------
    Female |       162         88 |       250
           |     42.30      40.74 |     41.74
-----------+----------------------+----------
     Total |       383        216 |       599
           |    100.00     100.00 |    100.00


. tab recipient_ethnicity group, col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

      27742: |
   recipient |         group
   ethnicity |      LDLT       DDLT |     Total
-------------+----------------------+----------
    Hispanic |        74         42 |       116
             |     19.32      19.44 |     19.37
-------------+----------------------+----------
Non-Hispanic |       309        174 |       483
             |     80.68      80.56 |     80.63
-------------+----------------------+----------
       Total |       383        216 |       599
             |    100.00     100.00 |    100.00


. tab recipient_race2 group, col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
```

```
| column percentage |
+-------------------+

recipient_ |         group
     race2 |      LDLT       DDLT |     Total
-----------+----------------------+----------
     White |       347        190 |       537
           |     90.60      87.96 |     89.65
-----------+----------------------+----------
     Black |        12         13 |        25
           |      3.13       6.02 |      4.17
-----------+----------------------+----------
     Asian |        15          7 |        22
           |      3.92       3.24 |      3.67
-----------+----------------------+----------
     Other |         9          6 |        15
           |      2.35       2.78 |      2.50
-----------+----------------------+----------
     Total |       383        216 |       599
           |    100.00     100.00 |    100.00


.
. bysort group: summarize srs_recip_bmi_enr

------------------------------------------------------------------------------
---
-> group = LDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
srs_re~i_enr |       380      26.671    5.217672   15.20377   45.68693

------------------------------------------------------------------------------
---
-> group = DDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
srs_re~i_enr |       216     26.8682     5.06985   15.04145   45.51257


.
. #delimit ;
delimiter now ;
. tab1 group  recip_dgn_bilatr_enr recip_dgn_chol_enr
recip_dgn_malig_nonhcc_enr
> recip_dgn_metab_enr
>   recip_dgn_othnoncc_enr recip_dgn_alcoh_enr recip_dgn_hcc1_enr
recip_dgn_hcc_e
> nr
>   recip_dgn_hcv1_enr recip_dgn_hcv_enr recip_dgn_other_enr if group==1;

-> tabulation of group if group==1

      group |      Freq.     Percent        Cum.
------------+-----------------------------------
       LDLT |        383      100.00      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_bilatr_enr if group==1

  recipient |
    any dgn |
```

```
(list/enr): |
    biliary |
    atresia |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        380       99.22       99.22
          1 |          3        0.78      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_chol_enr if group==1

  recipient |
    any dgn |
(list/enr): |
cholestatic |
      liver |
disease/cir |
        rho |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        312       81.46       81.46
          1 |         71       18.54      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_malig_nonhcc_enr if group==1

  recipient |
    any dgn |
(list/enr): |
  malignant |
  neoplasms |
 other than |
        hcc |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        374       97.65       97.65
          1 |          9        2.35      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_metab_enr if group==1

  recipient |
    any dgn |
(list/enr): |
  metabolic |
   diseases |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        372       97.13       97.13
          1 |         11        2.87      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_othnoncc_enr if group==1

  recipient |
    any dgn |
(list/enr): |
non-cholest |
       atic |
  cirrhosis |
 other than |
hcv/alcohol |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        303       79.11       79.11
          1 |         80       20.89      100.00
```

```
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_alcoh_enr if group==1

  recipient |
    any dgn |
(list/enr): |
   alcholic |
  cirrhosis |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        331       86.42       86.42
          1 |         52       13.58      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_hcc1_enr if group==1

recip_dgn_h |
    cc1_enr |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        333       86.95       86.95
          1 |         50       13.05      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_hcc_enr if group==1

  recipient |
    any dgn |
(list/enr): |
        hcc |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        326       85.12       85.12
          1 |         57       14.88      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_hcv1_enr if group==1

recip_dgn_h |
    cv1_enr |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        209       54.57       54.57
          1 |        174       45.43      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_hcv_enr if group==1

  recipient |
    any dgn |
(list/enr): |
hepatitis c |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        200       52.22       52.22
          1 |        183       47.78      100.00
------------+-----------------------------------
      Total |        383      100.00

-> tabulation of recip_dgn_other_enr if group==1

  recipient |
    any dgn |
(list/enr): |
```

```
      other |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        373       97.39       97.39
          1 |         10        2.61      100.00
------------+-----------------------------------
      Total |        383      100.00

.   #delimit ;
delimiter now ;
. tab1 group  recip_dgn_bilatr_enr recip_dgn_chol_enr
recip_dgn_malig_nonhcc_enr
> recip_dgn_metab_enr
>   recip_dgn_othnoncc_enr recip_dgn_alcoh_enr recip_dgn_hcc1_enr
recip_dgn_hcc_e
> nr
>   recip_dgn_hcv1_enr recip_dgn_hcv_enr recip_dgn_other_enr if group==10;

-> tabulation of group if group==10

      group |      Freq.     Percent        Cum.
------------+-----------------------------------
       DDLT |        216      100.00      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_bilatr_enr if group==10

  recipient |
    any dgn |
(list/enr): |
    biliary |
    atresia |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        216      100.00      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_chol_enr if group==10

  recipient |
    any dgn |
(list/enr): |
cholestatic |
      liver |
disease/cir |
        rho |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        178       82.41       82.41
          1 |         38       17.59      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_malig_nonhcc_enr if group==10

  recipient |
    any dgn |
(list/enr): |
  malignant |
  neoplasms |
 other than |
        hcc |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        213       98.61       98.61
          1 |          3        1.39      100.00
------------+-----------------------------------
```

```
      Total |        216      100.00

-> tabulation of recip_dgn_metab_enr if group==10

  recipient |
    any dgn |
(list/enr): |
  metabolic |
   diseases |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        209       96.76       96.76
          1 |          7        3.24      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_othnoncc_enr if group==10

  recipient |
    any dgn |
(list/enr): |
non-cholest |
       atic |
  cirrhosis |
 other than |
hcv/alcohol |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        168       77.78       77.78
          1 |         48       22.22      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_alcoh_enr if group==10

  recipient |
    any dgn |
(list/enr): |
   alcholic |
  cirrhosis |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        184       85.19       85.19
          1 |         32       14.81      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_hcc1_enr if group==10

recip_dgn_h |
    cc1_enr |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        188       87.04       87.04
          1 |         28       12.96      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_hcc_enr if group==10

  recipient |
    any dgn |
(list/enr): |
        hcc |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        183       84.72       84.72
          1 |         33       15.28      100.00
------------+-----------------------------------
      Total |        216      100.00
```

```
-> tabulation of recip_dgn_hcv1_enr if group==10

recip_dgn_h |
    cv1_enr |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        124       57.41       57.41
          1 |         92       42.59      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_hcv_enr if group==10

  recipient |
    any dgn |
(list/enr): |
hepatitis c |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        113       52.31       52.31
          1 |        103       47.69      100.00
------------+-----------------------------------
      Total |        216      100.00

-> tabulation of recip_dgn_other_enr if group==10

  recipient |
    any dgn |
(list/enr): |
      other |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        211       97.69       97.69
          1 |          5        2.31      100.00
------------+-----------------------------------
      Total |        216      100.00

. #delimit cr
delimiter now cr
.
. destring rct_medcond, replace
rct_medcond has all characters numeric; replaced as byte

. label define rct_medcond 1"ICU" 2"Hosp not ICU" 3"Not Hosp"

. label values rct_medcond rct_medcond

. tab rct_medcond group, col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

      27900: |
   recipient |
     medical |
   condition |
 immediately |
    prior to |         group
  transplant |      LDLT       DDLT |     Total
-------------+----------------------+----------
         ICU |         7         40 |        47
             |      1.83      18.52 |      7.85
-------------+----------------------+----------
Hosp not ICU |        42         48 |        90
```

```
             |     10.97      22.22 |     15.03
-------------+----------------------+----------
    Not Hosp |       334        128 |       462
             |     87.21      59.26 |     77.13
-------------+----------------------+----------
       Total |       383        216 |       599
             |    100.00     100.00 |    100.00


. * pause
.
. destring rct_vent rct_dialyze rct_ascites, replace
rct_vent has all characters numeric; replaced as byte
rct_dialyze has all characters numeric; replaced as byte
(1 missing value generated)
rct_ascites has all characters numeric; replaced as int
(4 missing values generated)

. label define yes_no 1"Yes" 2"No" 998"Unknown"

. label values rct_vent rct_dialyze rct_ascites yes_no

. tab rct_vent group, col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    27902: |
 recipient |
        on |
ventilator |
immediatel |
y prior to |         group
transplant |      LDLT       DDLT |     Total
-----------+----------------------+----------
       Yes |         5         17 |        22
           |      1.31       7.87 |      3.67
-----------+----------------------+----------
        No |       378        199 |       577
           |     98.69      92.13 |     96.33
-----------+----------------------+----------
     Total |       383        216 |       599
           |    100.00     100.00 |    100.00


. tab rct_dialyze group, col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    27918: |
 recipient |
  dialysis |
        at |         group
transplant |      LDLT       DDLT |     Total
-----------+----------------------+----------
       Yes |         5         16 |        21
```

```
           |      1.31       7.44 |      3.51
-----------+----------------------+----------
        No |       378        199 |       577
           |     98.69      92.56 |     96.49
-----------+----------------------+----------
     Total |       383        215 |       598
           |    100.00     100.00 |    100.00


. tab rct_ascites group, col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    27764: |
 recipient |          group
   ascites |      LDLT       DDLT |     Total
-----------+----------------------+----------
       Yes |       222        160 |       382
           |     58.12      75.12 |     64.20
-----------+----------------------+----------
        No |       155         53 |       208
           |     40.58      24.88 |     34.96
-----------+----------------------+----------
   Unknown |         5          0 |         5
           |      1.31       0.00 |      0.84
-----------+----------------------+----------
     Total |       382        213 |       595
           |    100.00     100.00 |    100.00


.
. bysort group: summarize rio_cit

-------------------------------------------------------------------------------
---
-> group = LDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
     rio_cit |       278    84.01079    95.01383         10        720

-------------------------------------------------------------------------------
---
-> group = DDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
     rio_cit |       198    473.8232    181.4078         75       1230


.
. recode rio_oplength (0=.)
(rio_oplength: 1 changes made)

. bysort group: summarize rio_oplength

-------------------------------------------------------------------------------
---
-> group = LDLT
```

```
    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
rio_oplength |       345     506.487    127.2979        198        948

-------------------------------------------------------------------------------
---
-> group = DDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
rio_oplength |       202    369.2277    94.03867        138        735


.
. gen meld_txp_category = meld_txp
(19 missing values generated)

. recode meld_txp_category (0/5=4)(6/10=6)(11/20=11)(21/30=21)(31/40=31)
(meld_txp_category: 515 changes made)

. tab meld_txp meld_txp_category

   meld at |
transplant |               meld_txp_category
  (max 40) |         6         11         21         31 |     Total
-----------+--------------------------------------------+----------
         6 |        16          0          0          0 |        16
         7 |        21          0          0          0 |        21
         8 |        18          0          0          0 |        18
         9 |        27          0          0          0 |        27
        10 |        20          0          0          0 |        20
        11 |         0         29          0          0 |        29
        12 |         0         37          0          0 |        37
        13 |         0         41          0          0 |        41
        14 |         0         42          0          0 |        42
        15 |         0         40          0          0 |        40
        16 |         0         33          0          0 |        33
        17 |         0         33          0          0 |        33
        18 |         0         24          0          0 |        24
        19 |         0         30          0          0 |        30
        20 |         0         24          0          0 |        24
        21 |         0          0         16          0 |        16
        22 |         0          0         15          0 |        15
        23 |         0          0         11          0 |        11
        24 |         0          0         10          0 |        10
        25 |         0          0         10          0 |        10
        26 |         0          0          7          0 |         7
        27 |         0          0          9          0 |         9
        28 |         0          0          3          0 |         3
        29 |         0          0          8          0 |         8
        30 |         0          0          5          0 |         5
        31 |         0          0          0          4 |         4
        32 |         0          0          0          6 |         6
        34 |         0          0          0          5 |         5
        35 |         0          0          0          5 |         5
        36 |         0          0          0          5 |         5
        37 |         0          0          0          2 |         2
        38 |         0          0          0          3 |         3
        39 |         0          0          0          3 |         3
        40 |         0          0          0         18 |        18
-----------+--------------------------------------------+----------
     Total |       102        333         94         51 |       580


. tab meld_txp_category group, col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

meld_txp_c |         group
   ategory |      LDLT       DDLT |     Total
-----------+----------------------+----------
         6 |        80         22 |       102
           |     20.89      10.19 |     17.03
-----------+----------------------+----------
        11 |       230        103 |       333
           |     60.05      47.69 |     55.59
-----------+----------------------+----------
        21 |        48         46 |        94
           |     12.53      21.30 |     15.69
-----------+----------------------+----------
        31 |        10         41 |        51
           |      2.61      18.98 |      8.51
-----------+----------------------+----------
         . |        15          4 |        19
           |      3.92       1.85 |      3.17
-----------+----------------------+----------
     Total |       383        216 |       599
           |    100.00     100.00 |    100.00


. bysort group: summarize meld_txp

-------------------------------------------------------------------------------
---
-> group = LDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
    meld_txp |       368    15.21467    6.293468          6         40

-------------------------------------------------------------------------------
---
-> group = DDLT

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
    meld_txp |       212          21    9.424683          6         40


.
. describe  meld_txp_score_missing -  rvscl_grade_any

              storage  display     value
variable name   type   format      label      variable label
-------------------------------------------------------------------------------
---
meld_txp_scor~g byte   %8.0g                  1 if meld at txp missing
                                                creat/inr/bili
bil_anas_site~t byte   %8.0g                  biliary anastomosis site
category:
                                                1=all roux, 0=not-all roux
rmor_gibld_2    str1   %1s
rmor_vwound     str1   %1s
r_tot_comp      byte   %8.0g                * number of complications
(including
                                                comp. that can be graded and
```

```
                                                  those that canno
i               byte   %8.0g
number_of_com~s byte   %8.0g
r_tot_comp_cat  byte   %8.0g
r_tot_comp_cat2 byte   %8.0g
r_tot_comp_cat3 byte   %8.0g                  if any complication
r_tot_comp_cat4 byte   %8.0g                  if >= 6 complications
r_any_bacte     byte   %8.0g                  pts with at least one bacterial
                                                infection
r_any_viral     byte   %8.0g                  pts with at least one viral
                                                infection
r_any_fungl     byte   %8.0g                  pts with at least one fungal
                                                infection
reexplore_new   byte   %8.0g
rblcs_grade     byte   %8.0g
rbscs_grade     byte   %8.0g
rabcs_grade     byte   %8.0g
rgibcs_grade    byte   %8.0g
raacs_grade     byte   %8.0g
rics_grade      byte   %8.0g
rbocs_grade     byte   %8.0g
rrecs_grade     byte   %8.0g
recs_grade      byte   %8.0g
rasccs_grade    byte   %8.0g
rhatcs_grade    byte   %8.0g
rpvtcs_grade    byte   %8.0g
rivctcs_grade   byte   %8.0g
rcrcs_grade     byte   %8.0g
rreccs_grade    byte   %8.0g
rdvtcs_grade    byte   %8.0g
rncs_grade      byte   %8.0g
rinfcs_grade    byte   %8.0g
rbocs_prbc      byte   %8.0g
rblcs_grade4    byte   %8.0g
rbscs_grade4    byte   %8.0g
rabcs_grade4    byte   %8.0g
rgibcs_grade4   byte   %8.0g
raacs_grade4    byte   %8.0g
rics_grade4     byte   %8.0g
rbocs_grade4    byte   %8.0g
rrecs_grade4    byte   %8.0g
recs_grade4     byte   %8.0g
rasccs_grade4   byte   %8.0g
rhatcs_grade4   byte   %8.0g
rpvtcs_grade4   byte   %8.0g
rivctcs_grade4  byte   %8.0g
rcrcs_grade4    byte   %8.0g
rreccs_grade4   byte   %8.0g
rdvtcs_grade4   byte   %8.0g
rncs_grade4     byte   %8.0g
rinfcs_grade4   byte   %8.0g
rblcs_grade_any byte   %8.0g
rbscs_grade_any byte   %8.0g
rabcs_grade_any byte   %8.0g
rgibcs_grade_~y byte   %8.0g
raacs_grade_any byte   %8.0g
rics_grade_any  byte   %8.0g
rbocs_grade_any byte   %8.0g
rrecs_grade_any byte   %8.0g
recs_grade_any  byte   %8.0g
rasccs_grade_~y byte   %8.0g
rhatcs_grade_~y byte   %8.0g
rpvtcs_grade_~y byte   %8.0g
rivctcs_grade~y byte   %8.0g
rcrcs_grade_any byte   %8.0g
```

```
rreccs_grade_~y byte   %8.0g
rdvtcs_grade_~y byte   %8.0g
rncs_grade_any  byte   %8.0g
rinfcs_grade_~y byte   %8.0g
r_retxp         byte   %8.0g                  any complication that led to
re-txp
r_dead          byte   %8.0g                  any complication that led to
death
rmor_bl_bs      byte   %8.0g                  at least one bile complications
rbl_bs_grade    byte   %8.0g                  clavien grade for combined bile
                                                complications
rbl_bs_grade4   byte   %8.0g                  grade 4 bile complications:
1=yes,
                                                0=no
rbl_bs_grade_~y byte   %8.0g                  any grade of bile complications:
                                                1=yes, 0=no
rmor_vscl       byte   %8.0g                  at least one of rmor_hat or
                                                rmor_pvt or rmor_ivct
rvscl_grade     byte   %8.0g                  clavien grade for combined
vascular
                                                complications
rvscl_grade4    byte   %8.0g                  grade 4 combined vascular
                                                complications: 1=yes, 0=no
rvscl_grade_any byte   %8.0g                  any grade grade of combined
                                                vascular complications: 1=yes,
                                                0=no

. tab1  meld_txp_score_missing -  rvscl_grade_any

-> tabulation of meld_txp_score_missing

  1 if meld |
     at txp |
    missing |
creat/inr/b |
        ili |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        580       96.83       96.83
          1 |         19        3.17      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of bil_anas_site_cat

    biliary |
anastomosis |
       site |
  category: |
1=all roux, |
  0=not-all |
       roux |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        184       47.79       47.79
          1 |        201       52.21      100.00
------------+-----------------------------------
      Total |        385      100.00

-> tabulation of rmor_gibld_2

rmor_gibld_ |
          2 |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         42        7.17        7.17
          2 |        544       92.83      100.00
------------+-----------------------------------
```

```
      Total |        586      100.00

-> tabulation of rmor_vwound
no observations

-> tabulation of r_tot_comp

  number of |
complicatio |
         ns |
 (including |
 comp. that |
     can be |
 graded and |
 those that |
      canno |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |         97       16.19       33.56
          2 |         97       16.19       49.75
          3 |         64       10.68       60.43
          4 |         52        8.68       69.12
          5 |         42        7.01       76.13
          6 |         26        4.34       80.47
          7 |         31        5.18       85.64
          8 |         20        3.34       88.98
          9 |         20        3.34       92.32
         10 |         16        2.67       94.99
         11 |         13        2.17       97.16
         12 |          7        1.17       98.33
         13 |          4        0.67       99.00
         14 |          2        0.33       99.33
         15 |          2        0.33       99.67
         16 |          2        0.33      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of i

          i |      Freq.     Percent        Cum.
------------+-----------------------------------
         19 |        599      100.00      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of number_of_complications

number_of_c |
omplication |
          s |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |         97       16.19       33.56
          2 |         97       16.19       49.75
          3 |         64       10.68       60.43
          4 |         52        8.68       69.12
          5 |         42        7.01       76.13
          6 |         26        4.34       80.47
          7 |         31        5.18       85.64
          8 |         20        3.34       88.98
          9 |         20        3.34       92.32
         10 |         16        2.67       94.99
         11 |         13        2.17       97.16
         12 |          7        1.17       98.33
         13 |          4        0.67       99.00
```

```
         14 |          2        0.33       99.33
         15 |          2        0.33       99.67
         16 |          2        0.33      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_tot_comp_cat

r_tot_comp_ |
        cat |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |         97       16.19       33.56
          2 |         97       16.19       49.75
          3 |         64       10.68       60.43
          4 |         52        8.68       69.12
          5 |         42        7.01       76.13
          7 |        143       23.87      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_tot_comp_cat2

r_tot_comp_ |
       cat2 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |         97       16.19       33.56
          2 |         97       16.19       49.75
          3 |         64       10.68       60.43
          4 |         52        8.68       69.12
          5 |         42        7.01       76.13
          6 |         26        4.34       80.47
          7 |         31        5.18       85.64
          8 |         20        3.34       88.98
          9 |         20        3.34       92.32
         11 |         46        7.68      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_tot_comp_cat3

     if any |
complicatio |
          n |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |        495       82.64      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_tot_comp_cat4

    if >= 6 |
complicatio |
         ns |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        456       76.13       76.13
          1 |        143       23.87      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_any_bacte

pts with at |
```

```
  least one |
  bacterial |
  infection |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        383       63.94       63.94
          1 |        216       36.06      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_any_viral

pts with at |
  least one |
      viral |
  infection |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        572       95.49       95.49
          1 |         27        4.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_any_fungl

pts with at |
  least one |
     fungal |
  infection |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        539       89.98       89.98
          1 |         60       10.02      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of reexplore_new

reexplore_n |
         ew |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        449       76.23       76.23
          1 |        140       23.77      100.00
------------+-----------------------------------
      Total |        589      100.00

-> tabulation of rblcs_grade

rblcs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         15       10.42       10.42
          2 |         99       68.75       79.17
          3 |         14        9.72       88.89
          4 |         16       11.11      100.00
------------+-----------------------------------
      Total |        144      100.00

-> tabulation of rbscs_grade

rbscs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          3        2.70        2.70
          2 |         86       77.48       80.18
          3 |         16       14.41       94.59
          4 |          6        5.41      100.00
------------+-----------------------------------
      Total |        111      100.00
```

```
-> tabulation of rabcs_grade

rabcs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          2 |         36       80.00       80.00
          3 |          1        2.22       82.22
          4 |          8       17.78      100.00
------------+-----------------------------------
      Total |         45      100.00

-> tabulation of rgibcs_grade

rgibcs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          4        9.52        9.52
          2 |         28       66.67       76.19
          3 |          3        7.14       83.33
          4 |          7       16.67      100.00
------------+-----------------------------------
      Total |         42      100.00

-> tabulation of raacs_grade

raacs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          1        2.22        2.22
          2 |         27       60.00       62.22
          3 |          8       17.78       80.00
          4 |          9       20.00      100.00
------------+-----------------------------------
      Total |         45      100.00

-> tabulation of rics_grade

 rics_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         16       61.54       61.54
          2 |          4       15.38       76.92
          3 |          2        7.69       84.62
          4 |          4       15.38      100.00
------------+-----------------------------------
      Total |         26      100.00

-> tabulation of rbocs_grade

rbocs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          7       38.89       38.89
          2 |          9       50.00       88.89
          3 |          2       11.11      100.00
------------+-----------------------------------
      Total |         18      100.00

-> tabulation of rrecs_grade

rrecs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          9        6.98        6.98
          2 |         95       73.64       80.62
          3 |          7        5.43       86.05
          4 |         18       13.95      100.00
------------+-----------------------------------
      Total |        129      100.00
```

```
-> tabulation of recs_grade

 recs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         10       25.00       25.00
          2 |         16       40.00       65.00
          3 |          5       12.50       77.50
          4 |          9       22.50      100.00
------------+-----------------------------------
      Total |         40      100.00

-> tabulation of rasccs_grade

rasccs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         39       42.39       42.39
          2 |         28       30.43       72.83
          3 |         12       13.04       85.87
          4 |         13       14.13      100.00
------------+-----------------------------------
      Total |         92      100.00

-> tabulation of rhatcs_grade

rhatcs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          2 |          8       26.67       26.67
          3 |          1        3.33       30.00
          4 |         21       70.00      100.00
------------+-----------------------------------
      Total |         30      100.00

-> tabulation of rpvtcs_grade

rpvtcs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          2 |          6       54.55       54.55
          4 |          5       45.45      100.00
------------+-----------------------------------
      Total |         11      100.00

-> tabulation of rivctcs_grade

rivctcs_gra |
         de |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          1       14.29       14.29
          2 |          4       57.14       71.43
          4 |          2       28.57      100.00
------------+-----------------------------------
      Total |          7      100.00

-> tabulation of rcrcs_grade

rcrcs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         22       66.67       66.67
          2 |          5       15.15       81.82
          3 |          2        6.06       87.88
          4 |          4       12.12      100.00
------------+-----------------------------------
      Total |         33      100.00
```

```
-> tabulation of rreccs_grade

rreccs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          9       39.13       39.13
          2 |          2        8.70       47.83
          3 |          5       21.74       69.57
          4 |          7       30.43      100.00
------------+-----------------------------------
      Total |         23      100.00

-> tabulation of rdvtcs_grade

rdvtcs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          1       11.11       11.11
          2 |          6       66.67       77.78
          4 |          2       22.22      100.00
------------+-----------------------------------
      Total |          9      100.00

-> tabulation of rncs_grade

 rncs_grade |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          4       33.33       33.33
          2 |          2       16.67       50.00
          3 |          6       50.00      100.00
------------+-----------------------------------
      Total |         12      100.00

-> tabulation of rinfcs_grade

rinfcs_grad |
          e |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         25       10.73       10.73
          2 |        161       69.10       79.83
          3 |         13        5.58       85.41
          4 |         34       14.59      100.00
------------+-----------------------------------
      Total |        233      100.00

-> tabulation of rbocs_prbc
no observations

-> tabulation of rblcs_grade4

rblcs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        583       97.33       97.33
          1 |         16        2.67      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rbscs_grade4

rbscs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        593       99.00       99.00
          1 |          6        1.00      100.00
```

```
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rabcs_grade4

rabcs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        591       98.66       98.66
          1 |          8        1.34      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rgibcs_grade4

rgibcs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        592       98.83       98.83
          1 |          7        1.17      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of raacs_grade4

raacs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        590       98.50       98.50
          1 |          9        1.50      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rics_grade4

rics_grade4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        595       99.33       99.33
          1 |          4        0.67      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rbocs_grade4

rbocs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        599      100.00      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rrecs_grade4

rrecs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        581       96.99       96.99
          1 |         18        3.01      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of recs_grade4

recs_grade4 |      Freq.     Percent        Cum.
------------+-----------------------------------
```

```
          0 |        590       98.50       98.50
          1 |          9        1.50      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rasccs_grade4

rasccs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        586       97.83       97.83
          1 |         13        2.17      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rhatcs_grade4

rhatcs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        578       96.49       96.49
          1 |         21        3.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rpvtcs_grade4

rpvtcs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        594       99.17       99.17
          1 |          5        0.83      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rivctcs_grade4

rivctcs_gra |
        de4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        597       99.67       99.67
          1 |          2        0.33      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rcrcs_grade4

rcrcs_grade |
          4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        595       99.33       99.33
          1 |          4        0.67      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rreccs_grade4

rreccs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        592       98.83       98.83
          1 |          7        1.17      100.00
------------+-----------------------------------
      Total |        599      100.00
```

```
-> tabulation of rdvtcs_grade4

rdvtcs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        597       99.67       99.67
          1 |          2        0.33      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rncs_grade4

rncs_grade4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        599      100.00      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rinfcs_grade4

rinfcs_grad |
         e4 |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        565       94.32       94.32
          1 |         34        5.68      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rblcs_grade_any

rblcs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        455       75.96       75.96
          1 |        144       24.04      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rbscs_grade_any

rbscs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        488       81.47       81.47
          1 |        111       18.53      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rabcs_grade_any

rabcs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        554       92.49       92.49
          1 |         45        7.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rgibcs_grade_any

rgibcs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        557       92.99       92.99
          1 |         42        7.01      100.00
```

```
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of raacs_grade_any

raacs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        554       92.49       92.49
          1 |         45        7.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rics_grade_any

rics_grade_ |
        any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        573       95.66       95.66
          1 |         26        4.34      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rbocs_grade_any

rbocs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        581       96.99       96.99
          1 |         18        3.01      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rrecs_grade_any

rrecs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        470       78.46       78.46
          1 |        129       21.54      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of recs_grade_any

recs_grade_ |
        any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        559       93.32       93.32
          1 |         40        6.68      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rasccs_grade_any

rasccs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        507       84.64       84.64
          1 |         92       15.36      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rhatcs_grade_any
```

```
rhatcs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        569       94.99       94.99
          1 |         30        5.01      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rpvtcs_grade_any

rpvtcs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        588       98.16       98.16
          1 |         11        1.84      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rivctcs_grade_any

rivctcs_gra |
     de_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        592       98.83       98.83
          1 |          7        1.17      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rcrcs_grade_any

rcrcs_grade |
       _any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        566       94.49       94.49
          1 |         33        5.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rreccs_grade_any

rreccs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        576       96.16       96.16
          1 |         23        3.84      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rdvtcs_grade_any

rdvtcs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        590       98.50       98.50
          1 |          9        1.50      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rncs_grade_any

rncs_grade_ |
        any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        587       98.00       98.00
          1 |         12        2.00      100.00
```

```
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rinfcs_grade_any

rinfcs_grad |
      e_any |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        366       61.10       61.10
          1 |        233       38.90      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_retxp

        any |
complicatio |
 n that led |
  to re-txp |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        556       92.82       92.82
          1 |         43        7.18      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of r_dead

        any |
complicatio |
 n that led |
   to death |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        550       91.82       91.82
          1 |         49        8.18      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rmor_bl_bs

   at least |
   one bile |
complicatio |
         ns |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        378       63.74       63.74
          1 |        215       36.26      100.00
------------+-----------------------------------
      Total |        593      100.00

-> tabulation of rbl_bs_grade

    clavien |
  grade for |
   combined |
       bile |
complicatio |
         ns |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        384       64.11       64.11
          1 |         15        2.50       66.61
          2 |        153       25.54       92.15
          3 |         26        4.34       96.49
          4 |         21        3.51      100.00
------------+-----------------------------------
      Total |        599      100.00
```

```
-> tabulation of rbl_bs_grade4

    grade 4 |
       bile |
complicatio |
 ns: 1=yes, |
       0=no |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        578       96.49       96.49
          1 |         21        3.51      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rbl_bs_grade_any

  any grade |
    of bile |
complicatio |
 ns: 1=yes, |
       0=no |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        384       64.11       64.11
          1 |        215       35.89      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rmor_vscl

   at least |
     one of |
rmor_hat or |
rmor_pvt or |
  rmor_ivct |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        555       92.65       92.65
          1 |         44        7.35      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rvscl_grade

    clavien |
  grade for |
   combined |
   vascular |
complicatio |
         ns |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        555       92.65       92.65
          2 |         17        2.84       95.49
          3 |          1        0.17       95.66
          4 |         26        4.34      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rvscl_grade4

    grade 4 |
   combined |
   vascular |
complicatio |
 ns: 1=yes, |
       0=no |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        573       95.66       95.66
```

```
          1 |         26        4.34      100.00
------------+-----------------------------------
      Total |        599      100.00

-> tabulation of rvscl_grade_any

  any grade |
   grade of |
   combined |
   vascular |
complicatio |
 ns: 1=yes, |
       0=no |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        555       92.65       92.65
          1 |         44        7.35      100.00
------------+-----------------------------------
      Total |        599      100.00

.
. tab recip_case

 srtr: case |
  number at |
 center for |
  this ldlt |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |          7        1.82        1.82
          2 |          4        1.04        2.86
          3 |          8        2.08        4.94
          4 |          8        2.08        7.01
          5 |          9        2.34        9.35
          6 |          8        2.08       11.43
          7 |          9        2.34       13.77
          8 |          9        2.34       16.10
          9 |          7        1.82       17.92
         10 |          8        2.08       20.00
         11 |          9        2.34       22.34
         12 |          8        2.08       24.42
         13 |          9        2.34       26.75
         14 |         10        2.60       29.35
         15 |          9        2.34       31.69
         16 |          9        2.34       34.03
         17 |         10        2.60       36.62
         18 |          8        2.08       38.70
         19 |         10        2.60       41.30
         20 |          9        2.34       43.64
         21 |          8        2.08       45.71
         22 |          8        2.08       47.79
         23 |          7        1.82       49.61
         24 |         10        2.60       52.21
         25 |          8        2.08       54.29
         26 |          5        1.30       55.58
         27 |          6        1.56       57.14
         28 |          6        1.56       58.70
         29 |          5        1.30       60.00
         30 |          5        1.30       61.30
         31 |          4        1.04       62.34
         32 |          5        1.30       63.64
         33 |          3        0.78       64.42
         34 |          5        1.30       65.71
         35 |          3        0.78       66.49
         36 |          3        0.78       67.27
         37 |          4        1.04       68.31
         38 |          3        0.78       69.09
```

```
          39 |          5        1.30       70.39
          40 |          4        1.04       71.43
          41 |          4        1.04       72.47
          42 |          4        1.04       73.51
          43 |          4        1.04       74.55
          44 |          4        1.04       75.58
          45 |          4        1.04       76.62
          46 |          4        1.04       77.66
          47 |          4        1.04       78.70
          48 |          4        1.04       79.74
          49 |          4        1.04       80.78
          50 |          4        1.04       81.82
          51 |          3        0.78       82.60
          52 |          4        1.04       83.64
          53 |          4        1.04       84.68
          54 |          3        0.78       85.45
          55 |          4        1.04       86.49
          56 |          4        1.04       87.53
          57 |          4        1.04       88.57
          58 |          4        1.04       89.61
          59 |          4        1.04       90.65
          60 |          4        1.04       91.69
          61 |          3        0.78       92.47
          62 |          4        1.04       93.51
          63 |          3        0.78       94.29
          64 |          3        0.78       95.06
          65 |          3        0.78       95.84
          66 |          2        0.52       96.36
          67 |          2        0.52       96.88
          68 |          3        0.78       97.66
          69 |          2        0.52       98.18
          70 |          1        0.26       98.44
          71 |          1        0.26       98.70
          72 |          1        0.26       98.96
          73 |          1        0.26       99.22
          74 |          1        0.26       99.48
          75 |          1        0.26       99.74
          76 |          1        0.26      100.00
-------------+-----------------------------------
       Total |        385      100.00

. gen tx_experience = recip_case
(214 missing values generated)

. recode tx_experience (1/20=0)(21/99=1)
(tx_experience: 385 changes made)

. tab recip_case tx_experience

srtr: case |
 number at |
center for |     tx_experience
 this ldlt |         0          1 |     Total
-----------+----------------------+----------
         1 |         7          0 |         7
         2 |         4          0 |         4
         3 |         8          0 |         8
         4 |         8          0 |         8
         5 |         9          0 |         9
         6 |         8          0 |         8
         7 |         9          0 |         9
         8 |         9          0 |         9
         9 |         7          0 |         7
        10 |         8          0 |         8
        11 |         9          0 |         9
```

12	8	0	8
13	9	0	9
14	10	0	10
15	9	0	9
16	9	0	9
17	10	0	10
18	8	0	8
19	10	0	10
20	9	0	9
21	0	8	8
22	0	8	8
23	0	7	7
24	0	10	10
25	0	8	8
26	0	5	5
27	0	6	6
28	0	6	6
29	0	5	5
30	0	5	5
31	0	4	4
32	0	5	5
33	0	3	3
34	0	5	5
35	0	3	3
36	0	3	3
37	0	4	4
38	0	3	3
39	0	5	5
40	0	4	4
41	0	4	4
42	0	4	4
43	0	4	4
44	0	4	4
45	0	4	4
46	0	4	4
47	0	4	4
48	0	4	4
49	0	4	4
50	0	4	4
51	0	3	3
52	0	4	4
53	0	4	4
54	0	3	3
55	0	4	4
56	0	4	4
57	0	4	4
58	0	4	4
59	0	4	4
60	0	4	4
61	0	3	3
62	0	4	4
63	0	3	3
64	0	3	3
65	0	3	3
66	0	2	2
67	0	2	2
68	0	3	3
69	0	2	2
70	0	1	1
71	0	1	1
72	0	1	1
73	0	1	1
74	0	1	1
75	0	1	1
76	0	1	1

```
-----------+----------------------+----------
     Total |       168        217 |       385


.
. tab ddlt ldlt

 exclusion |
 criterion |
      incl |
  dominoes |  exclusion criterion
and splits |         0          1 |     Total
-----------+----------------------+----------
         0 |         0        383 |       383
         1 |       216          0 |       216
-----------+----------------------+----------
     Total |       216        383 |       599


. replace tx_experience = 2 if ddlt==1
(216 real changes made)

. label define t3_labels 1">20 LD tx" 0"<=20 LD tx" 2"DDLT"

. label values tx_experience t3_labels

. label var  tx_experience "Experience of Transplant Center w/ LD transplants"

. tab tx_experience

 Experience |
         of |
 Transplant |
  Center w/ |
         LD |
transplants |      Freq.     Percent        Cum.
------------+-----------------------------------
 <=20 LD tx |        166       27.71       27.71
  >20 LD tx |        217       36.23       63.94
       DDLT |        216       36.06      100.00
------------+-----------------------------------
      Total |        599      100.00

.
. tab r_tot_comp

  number of |
complicatio |
         ns |
 (including |
 comp. that |
     can be |
 graded and |
 those that |
      canno |      Freq.     Percent        Cum.
------------+-----------------------------------
          0 |        104       17.36       17.36
          1 |         97       16.19       33.56
          2 |         97       16.19       49.75
          3 |         64       10.68       60.43
          4 |         52        8.68       69.12
          5 |         42        7.01       76.13
          6 |         26        4.34       80.47
          7 |         31        5.18       85.64
          8 |         20        3.34       88.98
```

```
          9 |         20        3.34       92.32
         10 |         16        2.67       94.99
         11 |         13        2.17       97.16
         12 |          7        1.17       98.33
         13 |          4        0.67       99.00
         14 |          2        0.33       99.33
         15 |          2        0.33       99.67
         16 |          2        0.33      100.00
------------+-----------------------------------
      Total |        599      100.00

. gen r_tot_comp2 = r_tot_comp

. recode r_tot_comp2 (10/16=10)
(r_tot_comp2: 30 changes made)

. label var  r_tot_comp2 "Total Complications -- 10 = 10+"

. tab r_tot_comp2  tx_experience, col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

     Total |
Complicati | Experience of Transplant Center
 ons -- 10 |        w/ LD transplants
     = 10+ | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
         0 |        14         47         43 |       104
           |      8.43      21.66      19.91 |     17.36
-----------+---------------------------------+----------
         1 |        21         37         39 |        97
           |     12.65      17.05      18.06 |     16.19
-----------+---------------------------------+----------
         2 |        28         33         36 |        97
           |     16.87      15.21      16.67 |     16.19
-----------+---------------------------------+----------
         3 |        18         24         22 |        64
           |     10.84      11.06      10.19 |     10.68
-----------+---------------------------------+----------
         4 |        14         15         23 |        52
           |      8.43       6.91      10.65 |      8.68
-----------+---------------------------------+----------
         5 |        14         17         11 |        42
           |      8.43       7.83       5.09 |      7.01
-----------+---------------------------------+----------
         6 |        11         11          4 |        26
           |      6.63       5.07       1.85 |      4.34
-----------+---------------------------------+----------
         7 |        15          7          9 |        31
           |      9.04       3.23       4.17 |      5.18
-----------+---------------------------------+----------
         8 |         7          7          6 |        20
           |      4.22       3.23       2.78 |      3.34
-----------+---------------------------------+----------
         9 |         8          7          5 |        20
           |      4.82       3.23       2.31 |      3.34
-----------+---------------------------------+----------
        10 |        16         12         18 |        46
           |      9.64       5.53       8.33 |      7.68
-----------+---------------------------------+----------
```

```
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. tab rmor_abbld tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30697: |
intra-abdo |
     minal |
bleeding-a |
 series of |
    bleeds |
      over |
   several |
      days | Experience of Transplant Center
   without |        w/ LD transplants
       ful | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          2          6 |        10
           |      1.20       0.92       2.78 |      1.67
-----------+---------------------------------+----------
         1 |        13         14         18 |        45
           |      7.83       6.45       8.33 |      7.51
-----------+---------------------------------+----------
         2 |       151        201        192 |       544
           |     90.96      92.63      88.89 |     90.82
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_abscess tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30704: |
 localized |
intra-abdo |
     minal |
 abscesses |
 that were |
   treated |
      with | Experience of Transplant Center
antibiotic |        w/ LD transplants
      s, s | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         4          5          8 |        17
           |      2.41       2.30       3.70 |      2.84
-----------+---------------------------------+----------
         1 |        17         17         11 |        45
           |     10.24       7.83       5.09 |      7.51
-----------+---------------------------------+----------
```

```
         2 |       145        195        197 |       537
           |     87.35      89.86      91.20 |     89.65
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_ascites tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30733: |
      post |
 operative |
  ascites. |
answer yes |
if ascites |
       was |
   treated | Experience of Transplant Center
      with |        w/ LD transplants
 diuretics | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          1          3 |         5
           |      0.60       0.46       1.39 |      0.83
-----------+---------------------------------+----------
         1 |        35         20         37 |        92
           |     21.08       9.22      17.13 |     15.36
-----------+---------------------------------+----------
         2 |       130        196        176 |       502
           |     78.31      90.32      81.48 |     83.81
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_aspir tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30724: |
aspiration |
   -sudden |
respirator |
y distress |
      that |
  required | Experience of Transplant Center
intubation |        w/ LD transplants
, associat | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          3          3 |         7
           |      0.60       1.38       1.39 |      1.17
-----------+---------------------------------+----------
         1 |         5          3          4 |        12
           |      3.01       1.38       1.85 |      2.00
-----------+---------------------------------+----------
```

```
         2 |       160        211        209 |       580
           |     96.39      97.24      96.76 |     96.83
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_bbile tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30744: | Experience of Transplant Center
 bacterial |        w/ LD transplants
 bile duct | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       147        199        208 |       554
           |     88.55      91.71      96.30 |     92.49
-----------+---------------------------------+----------
         1 |        19         18          8 |        45
           |     11.45       8.29       3.70 |      7.51
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. gen any_biliary = 0

. replace any_biliary = 1 if rmor_bile == "1"
(144 real changes made)

. replace any_biliary = 1 if rmor_strict == "1"
(71 real changes made)

. tab any_biliary tx_experience , col

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

           | Experience of Transplant Center
any_biliar |        w/ LD transplants
         y | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
         0 |        82        139        163 |       384
           |     49.40      64.06      75.46 |     64.11
-----------+---------------------------------+----------
         1 |        84         78         53 |       215
           |     50.60      35.94      24.54 |     35.89
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. tab rmor_bile tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30695: |
      bile |
leak/bilom |
a-presence |
        of |
persistent |
   bilious |
  drainage | Experience of Transplant Center
  beyond 7 |        w/ LD transplants
   days po | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          1          3 |         5
           |      0.60       0.46       1.39 |      0.83
-----------+---------------------------------+----------
         1 |        63         59         22 |       144
           |     37.95      27.19      10.19 |     24.04
-----------+---------------------------------+----------
         2 |       102        157        191 |       450
           |     61.45      72.35      88.43 |     75.13
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_strict tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30696: |
   biliary |
stricture- |
  presence |
        of |
 narrowing |
    of the |
intrahepat | Experience of Transplant Center
     ic or |        w/ LD transplants
extrahepat | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          4          4 |         9
           |      0.60       1.84       1.85 |      1.50
-----------+---------------------------------+----------
         1 |        36         40         35 |       111
           |     21.69      18.43      16.20 |     18.53
-----------+---------------------------------+----------
         2 |       129        173        177 |       479
           |     77.71      79.72      81.94 |     79.97
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
```

```
. tab rmor_bblood tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30745: | Experience of Transplant Center
 bacterial |        w/ LD transplants
     blood | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       128        184        184 |       496
           |     77.11      84.79      85.19 |     82.80
-----------+---------------------------------+----------
         1 |        38         33         32 |       103
           |     22.89      15.21      14.81 |     17.20
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_bcns tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30748: | Experience of Transplant Center
 bacterial |        w/ LD transplants
       cns | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       165        216        216 |       597
           |     99.40      99.54     100.00 |     99.67
-----------+---------------------------------+----------
         1 |         1          1          0 |         2
           |      0.60       0.46       0.00 |      0.33
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_bliv tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30746: | Experience of Transplant Center
 bacterial |        w/ LD transplants
     liver | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       159        213        214 |       586
           |     95.78      98.16      99.07 |     97.83
-----------+---------------------------------+----------
         1 |         7          4          2 |        13
           |      4.22       1.84       0.93 |      2.17
-----------+---------------------------------+----------
```

```
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_bl_bs tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

at least one bile complicati ons	Experience of Transplant Center w/ LD transplants <=20 LD t	>20 LD tx	DDLT	Total
0	81	137	160	378
	48.80	63.13	74.07	63.11
1	84	78	53	215
	50.60	35.94	24.54	35.89
.	1	2	3	6
	0.60	0.92	1.39	1.00
Total	166	217	216	599
	100.00	100.00	100.00	100.00

```
. tab rmor_bowel tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

30707: bowel obstructio n documented by imaging study or identified at re-explora	Experience of Transplant Center w/ LD transplants <=20 LD t	>20 LD tx	DDLT	Total
	2	6	5	13
	1.20	2.76	2.31	2.17
1	9	5	4	18
	5.42	2.30	1.85	3.01
2	155	206	207	568
	93.37	94.93	95.83	94.82
Total	166	217	216	599
	100.00	100.00	100.00	100.00

```
. tab rmor_bpulm tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

30747: bacterial pulmonary	Experience of Transplant Center w/ LD transplants <=20 LD t	>20 LD tx	DDLT	Total
	149	199	193	541
	89.76	91.71	89.35	90.32
1	17	18	23	58
	10.24	8.29	10.65	9.68
Total	166	217	216	599
	100.00	100.00	100.00	100.00

```
. tab rmor_buti tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

30749: bacterial urinary tract	Experience of Transplant Center w/ LD transplants <=20 LD t	>20 LD tx	DDLT	Total
	144	201	191	536
	86.75	92.63	88.43	89.48
1	22	16	25	63
	13.25	7.37	11.57	10.52
Total	166	217	216	599
	100.00	100.00	100.00	100.00

```
. tab rmor_bwound tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

30743: bacterial wound	Experience of Transplant Center w/ LD transplants <=20 LD t	>20 LD tx	DDLT	Total
	145	196	193	534
	87.35	90.32	89.35	89.15
1	21	21	23	65
	12.65	9.68	10.65	10.85
Total	166	217	216	599

```
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_chf tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

30712: congestive heart failure post-trans plant during the perioperative period	Experience of Transplant Center w/ LD transplants: <=20 LD tx	>20 LD tx	DDLT	Total
	1	1	5	7
	0.60	0.46	2.31	1.17
1	2	0	2	4
	1.20	0.00	0.93	0.67
2	163	216	209	588
	98.19	99.54	96.76	98.16
Total	166	217	216	599
	100.00	100.00	100.00	100.00

```
. tab rmor_cpr tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

30720: cardiopulmonary arrest-cessation of patients heartbeat and breathing. an	Experience of Transplant Center w/ LD transplants: <=20 LD tx	>20 LD tx	DDLT	Total
	2	3	3	8
	1.20	1.38	1.39	1.34
1	5	3	9	17
	3.01	1.38	4.17	2.84
2	159	211	204	574
	95.78	97.24	94.44	95.83
Total	166	217	216	599

```
           |    100.00     100.00     100.00 |    100.00


. tab rmor_cr tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30737: |
histologic |
        al |
  evidence |
of chronic |
rejection. |
  does not | Experience of Transplant Center
have to be |        w/ LD transplants
  treated  | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          1          3 |         5
           |      0.60       0.46       1.39 |      0.83
-----------+---------------------------------+----------
         1 |         8         12         13 |        33
           |      4.82       5.53       6.02 |      5.51
-----------+---------------------------------+----------
         2 |       157        204        200 |       561
           |     94.58      94.01      92.59 |     93.66
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_dehisc tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30728: |
dehiscence |
   -abrupt |
release of |
sutures/st |
     aples |
   causing | Experience of Transplant Center
 the wound |        w/ LD transplants
   to open | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          1          3 |         6
           |      1.20       0.46       1.39 |      1.00
-----------+---------------------------------+----------
         1 |         5          5          7 |        17
           |      3.01       2.30       3.24 |      2.84
-----------+---------------------------------+----------
         2 |       159        211        206 |       576
           |     95.78      97.24      95.37 |     96.16
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_dvt tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30740: |
 deep vein |
thrombosis |
  -treated |
      with | Experience of Transplant Center
anticoagul |        w/ LD transplants
      ants | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          3          4 |         9
           |      1.20       1.38       1.85 |      1.50
-----------+---------------------------------+----------
         1 |         2          2          5 |         9
           |      1.20       0.92       2.31 |      1.50
-----------+---------------------------------+----------
         2 |       162        212        207 |       581
           |     97.59      97.70      95.83 |     96.99
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_enceph tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30732: |
encephalop |
athy/hepat |
       ic |
coma-post- |
 operative |
liver-indu |
       ced | Experience of Transplant Center
   altered |        w/ LD transplants
  mental s | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          2          3 |         7
           |      1.20       0.92       1.39 |      1.17
-----------+---------------------------------+----------
         1 |         9          9         22 |        40
           |      5.42       4.15      10.19 |      6.68
-----------+---------------------------------+----------
         2 |       155        206        191 |       552
           |     93.37      94.93      88.43 |     92.15
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_fbile tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30758: | Experience of Transplant Center
    fungal |        w/ LD transplants
 bile duct | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       166        215        216 |       597
           |    100.00      99.08     100.00 |     99.67
-----------+---------------------------------+----------
         1 |         0          2          0 |         2
           |      0.00       0.92       0.00 |      0.33
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_fblood tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30759: | Experience of Transplant Center
    fungal |        w/ LD transplants
     blood | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       158        215        208 |       581
           |     95.18      99.08      96.30 |     96.99
-----------+---------------------------------+----------
         1 |         8          2          8 |        18
           |      4.82       0.92       3.70 |      3.01
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_fcns tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

           | Experience of Transplant Center
    30762: |        w/ LD transplants
fungal cns | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       163        216        216 |       595
           |     98.19      99.54     100.00 |     99.33
-----------+---------------------------------+----------
         1 |         3          1          0 |         4
           |      1.81       0.46       0.00 |      0.67
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_fliv tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30760: | Experience of Transplant Center
    fungal |        w/ LD transplants
     liver | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       162        216        216 |       594
           |     97.59      99.54     100.00 |     99.17
-----------+---------------------------------+----------
         1 |         4          1          0 |         5
           |      2.41       0.46       0.00 |      0.83
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_fpulm tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30761: | Experience of Transplant Center
    fungal |        w/ LD transplants
 pulmonary | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       160        216        202 |       578
           |     96.39      99.54      93.52 |     96.49
-----------+---------------------------------+----------
         1 |         6          1         14 |        21
           |      3.61       0.46       6.48 |      3.51
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_futi tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30763: |
    fungal | Experience of Transplant Center
   urinary |        w/ LD transplants
     tract | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       164        212        203 |       579
           |     98.80      97.70      93.98 |     96.66
-----------+---------------------------------+----------
         1 |         2          5         13 |        20
```

```
           |      1.20       2.30       6.02 |      3.34
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_fwound tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

```
    30757: | Experience of Transplant Center
    fungal |        w/ LD transplants
     wound | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |       160        215        213 |       588
           |     96.39      99.08      98.61 |     98.16
-----------+---------------------------------+----------
         1 |         6          2          3 |        11
           |      3.61       0.92       1.39 |      1.84
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_gibld tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

```
    30699: |
upper/lowe |
      r gi |
bleeding-a |
 series of |
    bleeds |
      over |
   several |
      days | Experience of Transplant Center
   without |        w/ LD transplants
      full | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         5          3          5 |        13
           |      3.01       1.38       2.31 |      2.17
-----------+---------------------------------+----------
         1 |        14         14          5 |        33
           |      8.43       6.45       2.31 |      5.51
-----------+---------------------------------+----------
         2 |         2          4          3 |         9
           |      1.20       1.84       1.39 |      1.50
-----------+---------------------------------+----------
         3 |       145        196        203 |       544
           |     87.35      90.32      93.98 |     90.82
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
.
. tab rmor_hat tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30734: |
   hepatic | Experience of Transplant Center
    artery |        w/ LD transplants
thrombosis | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          2          4 |         7
           |      0.60       0.92       1.85 |      1.17
-----------+---------------------------------+----------
         1 |        14         11          5 |        30
           |      8.43       5.07       2.31 |      5.01
-----------+---------------------------------+----------
         2 |       151        204        207 |       562
           |     90.96      94.01      95.83 |     93.82
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_hernia tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30730: |
   post-op |
    hernia | Experience of Transplant Center
developmen |        w/ LD transplants
         t | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          1          2 |         5
           |      1.20       0.46       0.93 |      0.83
-----------+---------------------------------+----------
         1 |        22         25         22 |        69
           |     13.25      11.52      10.19 |     11.52
-----------+---------------------------------+----------
         2 |       142        191        192 |       525
           |     85.54      88.02      88.89 |     87.65
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. tab rmor_ileus tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+
```

```
    30705: |
 prolonged |
   ileus-a |
  delay in |
 return of |
     bowel |
  function |
  beyond 7 | Experience of Transplant Center
      days |        w/ LD transplants
   post-op | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          3          4 |         9
           |      1.20       1.38       1.85 |      1.50
-----------+---------------------------------+----------
         1 |         5         11         10 |        26
           |      3.01       5.07       4.63 |      4.34
-----------+---------------------------------+----------
         2 |       159        203        202 |       564
           |     95.78      93.55      93.52 |     94.16
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_infect tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30742: |
      post |
 operative |
infection( |
        s) |
 requiring | Experience of Transplant Center
interventi |        w/ LD transplants
        on | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          2          3 |         6
           |      0.60       0.92       1.39 |      1.00
-----------+---------------------------------+----------
         1 |        80         76         77 |       233
           |     48.19      35.02      35.65 |     38.90
-----------+---------------------------------+----------
         2 |        85        139        136 |       360
           |     51.20      64.06      62.96 |     60.10
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_ivct tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30736: |
```

```
  inferior | Experience of Transplant Center
 vena cava |        w/ LD transplants
thrombosis | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          3          3 |         7
           |      0.60       1.38       1.39 |      1.17
-----------+---------------------------------+----------
         1 |         0          3          4 |         7
           |      0.00       1.38       1.85 |      1.17
-----------+---------------------------------+----------
         2 |       165        211        209 |       585
           |     99.40      97.24      96.76 |     97.66
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_mi tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30710: |
myocardial |
infarction |
post-donat |
ion during |
       the | Experience of Transplant Center
perioperat |        w/ LD transplants
ive period | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          2          4 |         7
           |      0.60       0.92       1.85 |      1.17
-----------+---------------------------------+----------
         1 |         1          2          1 |         4
           |      0.60       0.92       0.46 |      0.67
-----------+---------------------------------+----------
         2 |       164        213        211 |       588
           |     98.80      98.16      97.69 |     98.16
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_neuraprax tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30741: |
neuropraxi |
a-experien |
ce sensory |
  or motor |
peripheral |
     nerve | Experience of Transplant Center
dysfunctio |        w/ LD transplants
```

```
    n that | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          2          5 |         9
           |      1.20       0.92       2.31 |      1.50
-----------+---------------------------------+----------
         1 |         3          4          5 |        12
           |      1.81       1.84       2.31 |      2.00
-----------+---------------------------------+----------
         2 |       161        211        206 |       578
           |     96.99      97.24      95.37 |     96.49
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_other tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30765: |
     other | Experience of Transplant Center
complicati |        w/ LD transplants
       ons | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         3          3          5 |        11
           |      1.81       1.38       2.31 |      1.84
-----------+---------------------------------+----------
         1 |        49         61         53 |       163
           |     29.52      28.11      24.54 |     27.21
-----------+---------------------------------+----------
         2 |       114        153        158 |       425
           |     68.67      70.51      73.15 |     70.95
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_pe tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30726: |
 pulmonary |
embolism-s |
     udden |
  onset of |
   dyspnea |
associated |
      with | Experience of Transplant Center
 tachypnea |        w/ LD transplants
      and  | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          2          3 |         7
           |      1.20       0.92       1.39 |      1.17
-----------+---------------------------------+----------
```

```
         1 |         1          1          0 |         2
           |      0.60       0.46       0.00 |      0.33
-----------+---------------------------------+----------
         2 |       163        214        213 |       590
           |     98.19      98.62      98.61 |     98.50
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_pedem tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30718: |
 pulmonary |
edema-accu |
 mulations |
  of fluid |
    in the |
interstiti | Experience of Transplant Center
   al lung |        w/ LD transplants
 tissues,  | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          3          3 |         7
           |      0.60       1.38       1.39 |      1.17
-----------+---------------------------------+----------
         1 |        24         23         47 |        94
           |     14.46      10.60      21.76 |     15.69
-----------+---------------------------------+----------
         2 |       141        191        166 |       498
           |     84.94      88.02      76.85 |     83.14
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_pleur tx_experience , col missing

+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+

    30716: |
   pleural |
  effusion |
 requiring |
    either |
chest tube |
 placement |
        or | Experience of Transplant Center
thoracocen |        w/ LD transplants
     tesis | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         2          1          3 |         6
           |      1.20       0.46       1.39 |      1.00
-----------+---------------------------------+----------
```

```
         1 |        37         41         46 |        124
           |     22.29      18.89      21.30 |     20.70
-----------+---------------------------------+----------
         2 |       127        175        167 |        469
           |     76.51      80.65      77.31 |     78.30
-----------+---------------------------------+----------
     Total |       166        217        216 |        599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_pneumo tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

```
    30714: |
pneumothor |
        ax |
 requiring |
 placement | Experience of Transplant Center
of a chest |        w/ LD transplants
      tube | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         6          2          4 |        12
           |      3.61       0.92       1.85 |      2.00
-----------+---------------------------------+----------
         1 |         5          0          5 |        10
           |      3.01       0.00       2.31 |      1.67
-----------+---------------------------------+----------
         2 |       155        215        207 |       577
           |     93.37      99.08      95.83 |     96.33
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_pvt tx_experience , col missing
```

```
+--------------------+
| Key                |
|--------------------|
|     frequency      |
| column percentage  |
+--------------------+
```

```
    30735: |
    portal | Experience of Transplant Center
      vein |        w/ LD transplants
thrombosis | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         4          2          4 |        10
           |      2.41       0.92       1.85 |      1.67
-----------+---------------------------------+----------
         1 |         7          4          0 |        11
           |      4.22       1.84       0.00 |      1.84
-----------+---------------------------------+----------
         2 |       155        211        212 |       578
           |     93.37      97.24      98.15 |     96.49
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00
```

```
. tab rmor_recur tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30738: |
recurrence |
        of |
  original |
     liver |
disease-ex |
   cluding | Experience of Transplant Center
   hcv and |        w/ LD transplants
       hcc | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          4          4 |         9
           |      0.60       1.84       1.85 |      1.50
-----------+---------------------------------+----------
         1 |         9         11          3 |        23
           |      5.42       5.07       1.39 |      3.84
-----------+---------------------------------+----------
         2 |       156        202        209 |       567
           |     93.98      93.09      96.76 |     94.66
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_reexplore tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30708: |
re-explora |
tion-unpla |
      nned |
 return to |
       the |
 operating |
      room | Experience of Transplant Center
 following |        w/ LD transplants
 the trans | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         3          2          5 |        10
           |      1.81       0.92       2.31 |      1.67
-----------+---------------------------------+----------
         1 |        56         40         33 |       129
           |     33.73      18.43      15.28 |     21.54
-----------+---------------------------------+----------
         2 |         4          2          5 |        11
           |      2.41       0.92       2.31 |      1.84
-----------+---------------------------------+----------
         3 |       103        173        173 |       449
           |     62.05      79.72      80.09 |     74.96
-----------+---------------------------------+----------
```

```
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab rmor_resp tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

    30722: |
respirator |
         y |
arrest-req |
    uiring |
intubation |
   and not |
accompanie | Experience of Transplant Center
      d by |        w/ LD transplants
cardiac ar | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         1          6          5 |        12
           |      0.60       2.76       2.31 |      2.00
-----------+---------------------------------+----------
         1 |         4          8         15 |        27
           |      2.41       3.69       6.94 |      4.51
-----------+---------------------------------+----------
         2 |       161        203        196 |       560
           |     96.99      93.55      90.74 |     93.49
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. gen rmor_reexplore_collapsed = rmor_reexplore
(10 missing values generated)

. replace rmor_reexplore_collapsed = "1" if rmor_reexplore_collapsed=="2"
(11 real changes made)

. tab rmor_reexplore_collapsed tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

rmor_reexp | Experience of Transplant Center
lore_colla |        w/ LD transplants
      psed | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         3          2          5 |        10
           |      1.81       0.92       2.31 |      1.67
-----------+---------------------------------+----------
         1 |        60         42         38 |       140
           |     36.14      19.35      17.59 |     23.37
-----------+---------------------------------+----------
         3 |       103        173        173 |       449
           |     62.05      79.72      80.09 |     74.96
```

```
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. gen rmor_gibld_collapsed = rmor_gibld
(13 missing values generated)

. replace rmor_gibld_collapsed = "1" if rmor_gibld_collapsed=="2"
(9 real changes made)

. tab rmor_gibld_collapsed tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

           | Experience of Transplant Center
rmor_gibld |        w/ LD transplants
_collapsed | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
           |         5           3          5 |        13
           |      3.01        1.38       2.31 |      2.17
-----------+---------------------------------+----------
         1 |        16          18          8 |        42
           |      9.64        8.29       3.70 |      7.01
-----------+---------------------------------+----------
         3 |       145         196        203 |       544
           |     87.35       90.32      93.98 |     90.82
-----------+---------------------------------+----------
     Total |       166         217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. tab  r_any_bacte tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

  pts with |
  at least |
       one | Experience of Transplant Center
 bacterial |        w/ LD transplants
 infection | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
         0 |        97         142        144 |       383
           |     58.43       65.44      66.67 |     63.94
-----------+---------------------------------+----------
         1 |        69          75         72 |       216
           |     41.57       34.56      33.33 |     36.06
-----------+---------------------------------+----------
     Total |       166         217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab  r_any_viral tx_experience , col missing
```

```
+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

  pts with |
  at least | Experience of Transplant Center
 one viral |        w/ LD transplants
 infection | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
         0 |       159        211        202 |       572
           |     95.78      97.24      93.52 |     95.49
-----------+---------------------------------+----------
         1 |         7          6         14 |        27
           |      4.22       2.76       6.48 |      4.51
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


. tab  r_any_fungl tx_experience , col missing

+-------------------+
| Key               |
|-------------------|
|     frequency     |
| column percentage |
+-------------------+

  pts with |
  at least | Experience of Transplant Center
one fungal |        w/ LD transplants
 infection | <=20 LD t  >20 LD tx       DDLT |     Total
-----------+---------------------------------+----------
         0 |       144        204        191 |       539
           |     86.75      94.01      88.43 |     89.98
-----------+---------------------------------+----------
         1 |        22         13         25 |        60
           |     13.25       5.99      11.57 |     10.02
-----------+---------------------------------+----------
     Total |       166        217        216 |       599
           |    100.00     100.00     100.00 |    100.00


.
. * tab  recip_dgn_ahn_txp tx_experience , col missing
. * AHN (acute hepatic necrosis) generated by June 2nd code from Tempie
.
.
.
end of do-file

. exit, clear
```

```
-------------------------------------------------------------------------------
      name:  <unnamed>
       log:  C:\A2ALL_Files_No_Data_MASTER\NEW_Oct_2010\DSIC_Donor_Table_1b.log
  log type:  text
 opened on:  19 Oct 2010, 10:44:58

. pause on

. set more off

.
. * gen rawdate =  don_hp_date
. * sort rawdate
. * tab rawdate
. * list rawdate don_hp_date in 1/10
. * drop if rawdate > 15762
. * tab don_hp_date in 1/10
. * generate group =  (10*ddlt) + ldlt
. * recode group ( 0 = .)
. * label define group 10"DDLT" 1"LDLT"
. * label values group group
.
. * DROP if date of surgery is missing, i.e., no transplant
. drop if dio_surgery == .
(607 observations deleted)

.
. * DROP if date of evaluation after Feb 28, 2003 (day = 15762)
. generate rawdate = dnr_eval_date

. sort rawdate

. list dnr_eval_date rawdate in 1/10

     +----------------------+
     | dnr_eva~e   rawdate |
     |----------------------|
  1. | 11 Feb 98     13921 |
  2. | 01 Apr 98     13970 |
  3. | 18 Apr 98     13987 |
  4. | 28 May 98     14027 |
  5. | 05 Jun 98     14035 |
     |----------------------|
  6. | 08 Jun 98     14038 |
  7. | 23 Jun 98     14053 |
  8. | 30 Aug 98     14121 |
  9. | 04 Sep 98     14126 |
 10. | 04 Sep 98     14126 |
     +----------------------+

. list dnr_eval_date rawdate in 310/320

     +----------------------+
     | dnr_eva~e   rawdate |
     |----------------------|
310. | 03 Jan 02     15343 |
311. | 04 Jan 02     15344 |
312. | 09 Jan 02     15349 |
313. | 22 Jan 02     15362 |
314. | 24 Jan 02     15364 |
     |----------------------|
315. | 25 Jan 02     15365 |
```

```
316. | 28 Jan 02     15368 |
317. | 30 Jan 02     15370 |
318. | 30 Jan 02     15370 |
319. | 13 Feb 02     15384 |
     |---------------------|
320. | 25 Feb 02     15396 |
     +---------------------+

. drop if rawdate == .
(0 observations deleted)

. * list dnr_eval_date rawdate
. * tab rawdate
. drop if rawdate > 15763
(1 observation deleted)

. summarize rawdate

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
     rawdate |       403    14981.33    443.2636      13921      15760

.
. * pause
.
. gen year_transplant = yofd(dio_surgery)

. gen year_birth = enr_yob

. gen age_at_transplant = year_transplant - year_birth

.
. list enr_yob dio_surgery age_at_transplant in 1/10

     +--------------------------------+
     | enr_yob   dio_sur~y   age_at~t |
     |--------------------------------|
  1. |    1959   28 May 98         39 |
  2. |    1960   02 Sep 98         38 |
  3. |    1972   19 Apr 98         26 |
  4. |    1957   08 Jul 98         41 |
  5. |    1948   22 Jun 98         50 |
     |--------------------------------|
  6. |    1947   17 Jun 98         51 |
  7. |    1972   29 Jul 98         26 |
  8. |    1970   20 Nov 98         28 |
  9. |    1943   16 Dec 98         55 |
 10. |    1971   02 Nov 98         27 |
     +--------------------------------+

. list enr_yob dio_surgery age_at_transplant in 250/260

     +--------------------------------+
     | enr_yob   dio_sur~y   age_at~t |
     |--------------------------------|
250. |    1975   28 Aug 01         26 |
251. |    1964   24 Sep 01         37 |
252. |    1951   31 Aug 01         50 |
253. |    1967   01 Oct 01         34 |
254. |    1950   12 Sep 01         51 |
     |--------------------------------|
255. |    1976   24 Aug 01         25 |
256. |    1962   12 Oct 01         39 |
257. |    1951   10 Dec 01         50 |
```

```
258. |    1955   23 Oct 01         46 |
259. |    1965   19 Sep 01         36 |
     |-------------------------------|
260. |    1967   04 Sep 01         34 |
     +-------------------------------+

.
. tab age_at_transplant, missing

age_at_tran |
     splant |      Freq.     Percent        Cum.
------------+-----------------------------------
         18 |          2        0.50        0.50
         19 |          5        1.24        1.74
         20 |          3        0.74        2.48
         21 |          5        1.24        3.72
         22 |          9        2.23        5.96
         23 |         12        2.98        8.93
         24 |         16        3.97       12.90
         25 |          6        1.49       14.39
         26 |         14        3.47       17.87
         27 |         12        2.98       20.84
         28 |         10        2.48       23.33
         29 |         13        3.23       26.55
         30 |         13        3.23       29.78
         31 |         13        3.23       33.00
         32 |         13        3.23       36.23
         33 |          6        1.49       37.72
         34 |          9        2.23       39.95
         35 |         12        2.98       42.93
         36 |         22        5.46       48.39
         37 |         14        3.47       51.86
         38 |         14        3.47       55.33
         39 |         13        3.23       58.56
         40 |         14        3.47       62.03
         41 |         21        5.21       67.25
         42 |          8        1.99       69.23
         43 |          8        1.99       71.22
         44 |         15        3.72       74.94
         45 |         16        3.97       78.91
         46 |         11        2.73       81.64
         47 |          7        1.74       83.37
         48 |         10        2.48       85.86
         49 |          7        1.74       87.59
         50 |         11        2.73       90.32
         51 |         11        2.73       93.05
         52 |         10        2.48       95.53
         53 |          4        0.99       96.53
         54 |          4        0.99       97.52
         55 |          7        1.74       99.26
         56 |          1        0.25       99.50
         57 |          1        0.25       99.75
         59 |          1        0.25      100.00
------------+-----------------------------------
      Total |        403      100.00

. summarize age_at_transplant

    Variable |       Obs        Mean    Std. Dev.       Min        Max
-------------+--------------------------------------------------------
age_at_tra~t |       403    36.93797    9.618009         18         59

. tab dio_hypotn
```

```
     30609: |
hypotension |
   (<100 mm |
 hg) during |
the surgery |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |         88       22.92       22.92
          2 |        296       77.08      100.00
------------+-----------------------------------
      Total |        384      100.00

. recode dio_bilert (0=.) (3/5=3)
(dio_bilert: 3 changes made)

. tab dio_bilert, missing

     30605: |
  number of |
 bile ducts |
 from right |
       lobe |      Freq.     Percent        Cum.
------------+-----------------------------------
          1 |        211       52.36       52.36
          2 |        137       34.00       86.35
          3 |         23        5.71       92.06
          . |         32        7.94      100.00
------------+-----------------------------------
      Total |        403      100.00

.
end of do-file

. log close
      name:  <unnamed>
       log:  C:\A2ALL_Files_No_Data_MASTER\NEW_Oct_2010\DSIC_Donor_Table_1b.log
  log type:  text
 closed on:  19 Oct 2010, 10:46:04
-------------------------------------------------------------------------------
```